Goodman Logistics Center

TRAFFIC IMPACT ANALYSIS

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
DIF	Development Impact Fee
E+P	Existing Plus Project
EIR	Environmental Impact Report
FAR	Floor to Area Ratio
FHWA	Federal Highway Administration
HCM	Highway Capacity Manual
ICU	Intersection Capacity Utilization
ITE	Institute of Transportation Engineers
LA	Los Angeles
LOS	Level of Service
METRO	Metropolitan Transportation Authority
MUTCD	Manual on Uniform Traffic Control Devices
N/A	Not Applicable
PCE	Passenger Car Equivalents
PeMS	Performance Measurement System
PHF	Peak Hour Factor
Project	Goodman Logistics Center
RSA	Regional Statistical Area
RTPA	Regional Transportation Planning Agency
SBCTA	San Bernardino County Transportation Authority
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
SHS	State Highway System
TIA	Traffic Impact Analysis
tsf	Thousand Square Feet
v/c	Volume to Capacity

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1 INTRODUCTION

This report presents the results of the traffic impact analysis (TIA) for the proposed Goodman Logistics Center ("Project") located on the southeast corner of Shirley Avenue and Lower Azusa Road in the as shown on Exhibit 1-1.

The purpose of this TIA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project and recommend improvements to achieve acceptable circulation system operational conditions. In addition, the Project Applicant is proposing an addendum to the General Plan and Zoning Code Update Environmental Impact Report (EIR) (referred to as the "General Plan Update EIR"). (1) This TIA has been prepared to also compare the Project's impacts with the impacts of the Project analyzed in the General Plan Update EIR.

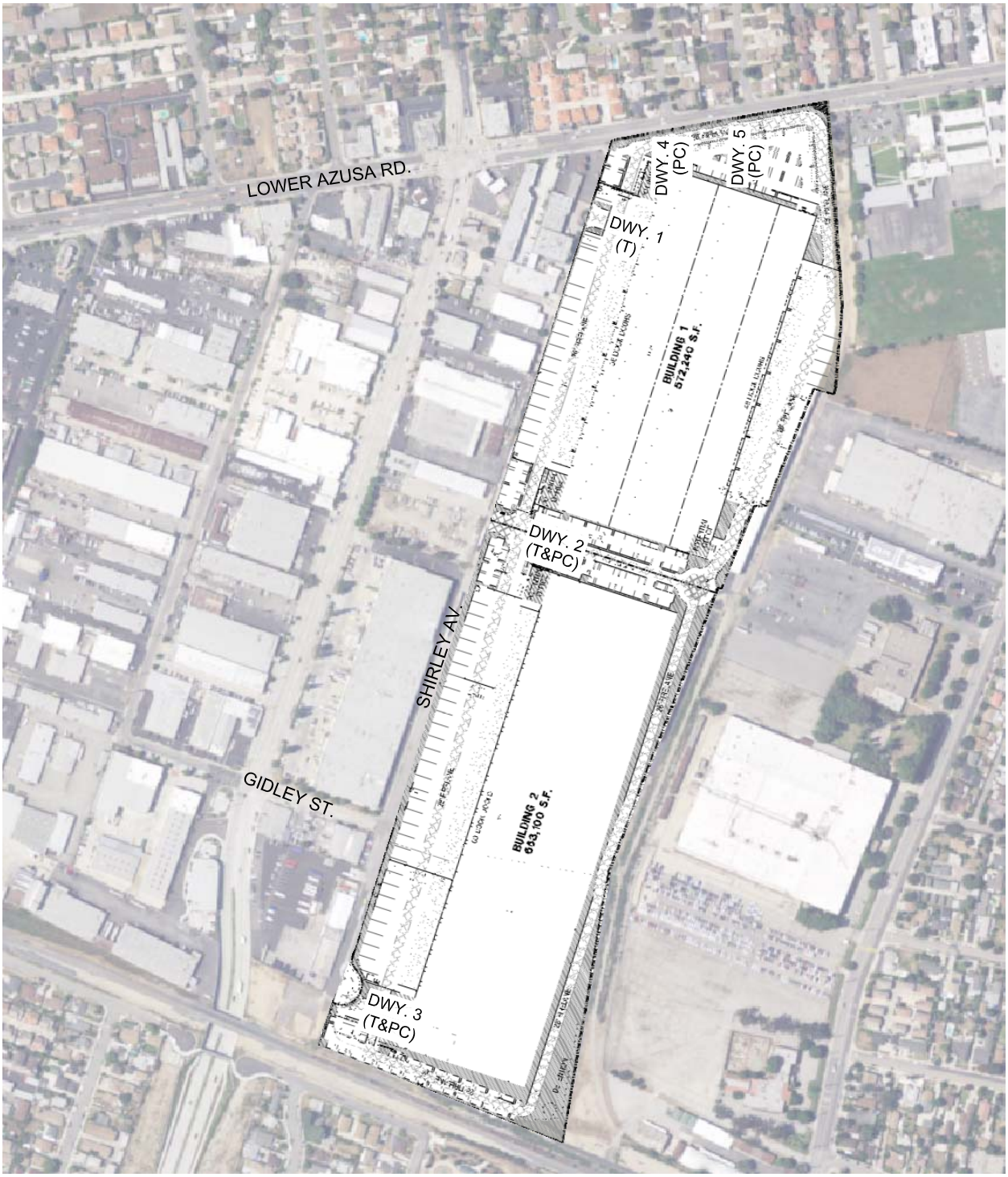
As directed by staff, this TIA has been prepared in accordance with the Los Angeles County Traffic Impact Analysis Report Guidelines (January 1, 1997). (2) This traffic study has also been prepared in accordance with the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies (December 2002), and consultation with staff during the scoping process. (3) The approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TIA.

1.1 PROJECT OVERVIEW

It is our understanding that the Project is proposed to consist of 1,235,340 square feet of high cube transload and short-term storage warehouse use within two buildings (572,240 square feet for Building 1 and 663,100 square feet for Building 2). The proposed land use is consistent with the City's General Plan. For the purposes of this analysis, the Project is anticipated to be developed in a single phase with an Opening Year of 2020.

Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017. (4) The Project is estimated to generate a net total of 2,561 passenger car equivalent (PCE) trip-ends per day on a typical weekday with approximately 146 PCE AM peak hour trips and 181 PCE PM peak hour trips. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

EXHIBIT 1-1: PRELIMINARY SITE PLAN



LEGEND:

(T&PC) = TRUCKS AND PASSENGER CARS

(PC) = PASSENGER CARS ONLY

(T) = TRUCKS ONLY

N

11274 - siteplan.dwg

URBAN CROSSROADS

1.2 ANALYSIS SCENARIOS

For the purposes of this traffic study, potential impacts to traffic and circulation have been assessed for each of the following conditions:

- Existing (2017)
- Existing plus Project (E+P)
- Opening Year Cumulative (2020) Without and With Project
- Horizon Year (2035) Without and With Project

1.2.1 EXISTING CONDITIONS

Existing physical conditions have been disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

1.2.2 EXISTING PLUS PROJECT CONDITIONS

The Existing plus Project (E+P) analysis determines circulation system deficiencies that would occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions. Traffic being generated by the existing facility on the Project site was found to be nominal. As such, no credit was taken for the existing uses and Project traffic was added to the Existing baseline in an effort to conduct a conservative analysis.

1.2.3 OPENING YEAR CUMULATIVE (2020) CONDITIONS

The Opening Year Cumulative conditions analysis determines the Project's contribution to near-term cumulative traffic impacts based on a comparison of the With Project traffic scenario to the Without Project traffic scenario. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth from Existing (2017) conditions of 1.49% (0.49% per year, compounded over three years) is included for Opening Year Cumulative (2020) traffic conditions, as well as traffic generated by cumulative projects that could affect the study intersections.

The generalized growth factors provided in 2010 Los Angeles (LA) County Congestion Management Program (CMP) indicates a growth factor of 1.131 for ten years (2010 to 2035) or 0.49% per year for the Regional Statistical Area (RSA) 25 (Pasadena) in which the Project is located.

1.2.4 HORIZON YEAR (2035) CONDITIONS

The Horizon Year conditions analysis is utilized to determine if improvements funded through local and regional transportation mitigation fee programs, or other approved funding mechanism can accommodate long-term cumulative traffic growth at the target level of service (LOS) identified by the and surrounding jurisdictions.

Horizon Year Without Project traffic conditions include an ambient traffic growth factor of 9.27% (0.49% per year over 18 years) based on the growth factors provided in LA County CMP for RSA

25. A growth factor of 1.131 was estimated for 25 years (from 2010 to 2035) in LA County CMP, which is equivalent to 0.49% per year growth. Lastly, traffic generated by cumulative projects that could affect the study intersections was added on top of the ambient growth.

1.3 STUDY AREA

The Project study area was defined in coordination with the . The City does not have their own traffic study guidelines. As directed by staff, this TIA has been prepared in accordance with the Los Angeles County Traffic Impact Analysis Report Guidelines (January 1, 1997). (2) Consistent with County's traffic study guidelines, the study area includes any intersection of "Collector" or higher classification street with other "Collector" or higher classification streets, at which the proposed project will add 50 or more peak hour trips. Exhibit 1-2 presents the study area and intersection analysis locations.

The "50 peak hour trip" criteria generally represents a minimum number of trips at which a typical intersection would have the potential to be substantively impacted by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely-utilized tool for estimating a potential area of impact (i.e., study area). To ensure that this TIA satisfies the needs of the , Urban Crossroads, Inc. prepared a Project specific traffic study scoping agreement for review by City staff prior to the preparation of this TIA. The agreement provides an outline of the study area, trip generation, trip distribution, and analysis methodology. The agreement approved by the is included in Appendix 1.1.

1.3.1 INTERSECTIONS

The following 27 study area intersections shown on Exhibit 1-2 and listed in Table 1-1 were selected for this TIA based on consultation with staff. It should be noted that the study area includes study area intersections that were not evaluated in the General Plan Update EIR. These locations were added at the request of City staff.

EXHIBIT 1-2: LOCATION MAP

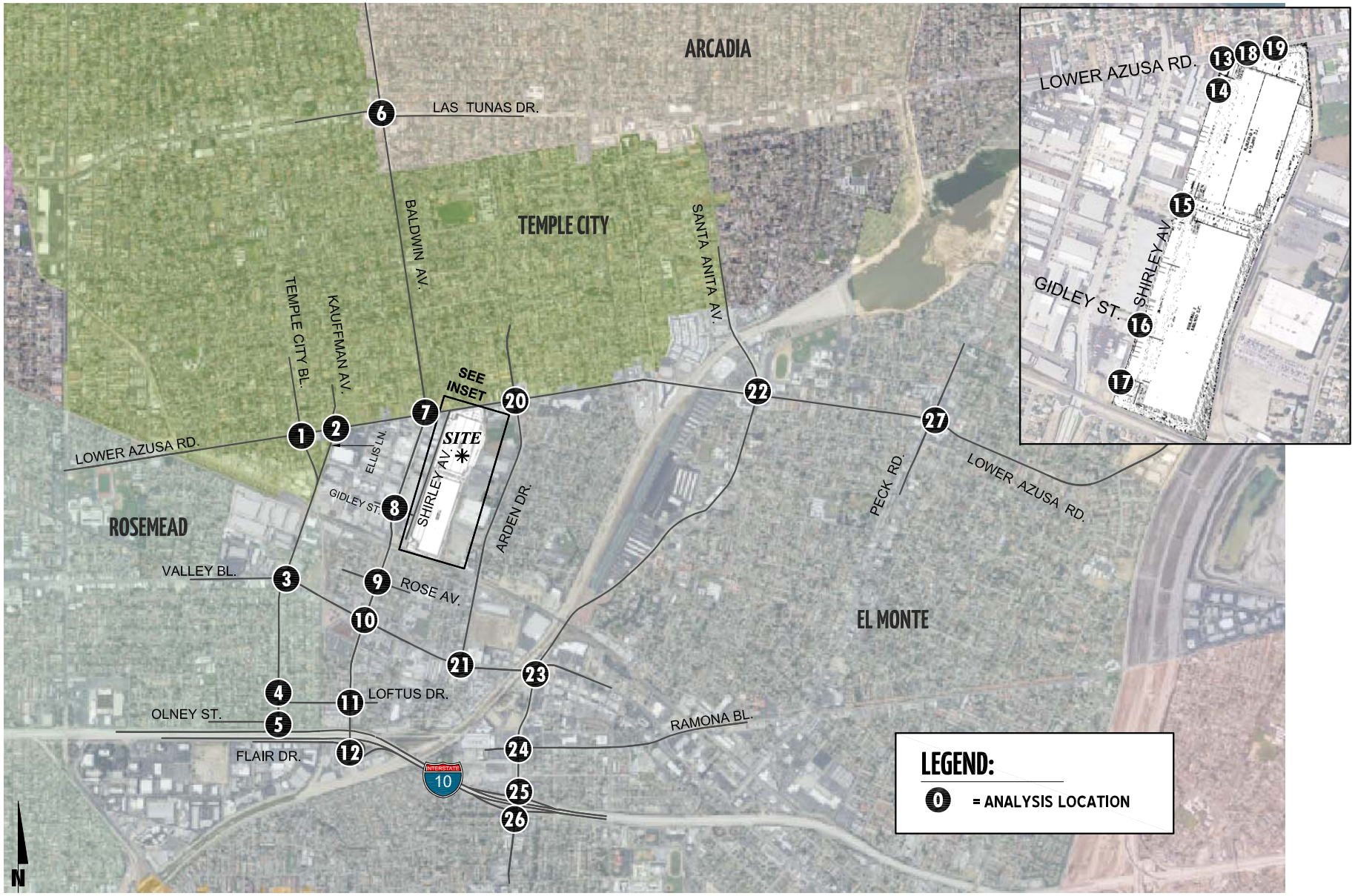


TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
1	Temple City Bl. & Lower Azusa Rd.	Temple City
2	Kauffman Av./Ellis Ln. & Lower Azusa Rd.	El Monte, Temple City
3	Temple City Bl. & Valley Bl.	Rosemead
4	Temple City Bl. & Loftus Dr.	Rosemead
5	Temple City Bl. & Olney St.	Rosemead
6	Baldwin Av. & Las Tunas Dr.	Arcadia
7	Baldwin Av. & Lower Azusa Rd.	El Monte, Temple City
8	Baldwin Av. & Gidley St.	El Monte
9	Baldwin Av. & Rose Av.	El Monte
10	Baldwin Av. & Valley Bl.	El Monte
11	Baldwin Av. & Loftus Dr.	El Monte
12	Baldwin Av. & I-10 Eastbound Ramps	Caltrans, El Monte
13	Shirley Av. & Lower Azusa Rd.	El Monte, Temple City
14	Shirley Av. & Driveway 1 – Future Intersection	El Monte
15	Shirley Av. & Driveway 2 – Future Intersection	El Monte
16	Shirley Av. & Gidley St.	El Monte
17	Shirley Av. & Driveway 3 – Future Intersection	El Monte
18	Driveway 4 & Lower Azusa Rd. – Future Intersection	El Monte, Temple City
19	Driveway 5 & Lower Azusa Rd. – Future Intersection	El Monte, Temple City
20	Arden Dr. & Lower Azusa Rd.	El Monte, Temple City
21	Arden Dr. & Valley Bl.	El Monte
22	Santa Anita Av. & Lower Azusa Rd.	El Monte
23	Santa Anita Av. & Valley Bl.	El Monte
24	Santa Anita Av. & Ramona Bl.	El Monte
25	Santa Anita Av. & I-10 Westbound Ramps	Caltrans, El Monte
26	Santa Anita Av. & I-10 Eastbound Ramps	Caltrans, El Monte
27	Peck Rd. & Lower Azusa Rd.	El Monte

1.3.2 ROADWAY SEGMENTS

The following 9 study area roadway segments listed in Table 1-2 were selected for this TIA based on consultation with staff.

TABLE 1-2: ROADWAY SEGMENT ANALYSIS LOCATIONS

ID	Roadway Segment	Segment Limits
1	Lower Azusa Rd.	Baldwin Av. to Arden Dr.
2	Lower Azusa Rd.	Arden Dr. to Santa Anita Av.
3	Lower Azusa Rd.	Santa Anita Av. to Peck Rd.
4	Valley Bl.	Baldwin Av. to Arden Dr.
5	Valley Bl.	Santa Anita Av. to Tyler Av.
6	Baldwin Av.	Lower Azusa Rd. to Valley Bl.
7	Baldwin Av.	Valley Bl. to I-10 Freeway
8	Santa Anita Av.	Valley Bl. to Ramona Bl.
9	Santa Anita Av.	Ramona B. to I-10 Freeway

1.4 ANALYSIS FINDINGS

This section provides a summary of the analysis results for Existing (2017), E+P, Opening Year Cumulative (2020), and Horizon Year (2035) traffic conditions.

1.4.1 INTERSECTIONS

Existing (2017) Conditions

For Existing (2017) traffic conditions, the following intersections are currently operating at an unacceptable LOS (i.e., LOS E or worse) during one or more peak hours:

- Baldwin Av. & Loftus Dr. (#11) – LOS F AM and PM peak hours
- Baldwin Av. & Flair Dr. (#12) – LOS F AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – LOS E PM peak hour only
- Santa Anita Av. & Valley Bl. (#23) – LOS E AM peak hour only
- Peck Rd. & Lower Azusa Rd. (#27) – LOS E AM peak hour only

E+P Conditions

The intersection analysis results indicate that the addition of Project traffic is not anticipated to result in any additional LOS deficiencies, in addition to those previously identified under Existing (2017) traffic conditions. However, the addition of Project traffic is anticipated to result in an increase to the volume-to-capacity (v/c) ratio of 0.01 or more during the peak hours at the following intersections, resulting in a significant cumulative impact for E+P traffic conditions:

- Baldwin Av. & Valley Bl. (#10) – v/c > 0.02 during the PM peak hour
- Baldwin Av. & Loftus Dr. (#11) – v/c > 0.01 or more during the AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – v/c > 0.01 during the PM peak hour
- Santa Anita Av. & Valley Bl. (#23) – v/c > 0.01 during the AM peak hour

Opening Year Cumulative (2020) Without Project Conditions

The intersection analysis results for Opening Year Cumulative (2020) Without Project traffic conditions indicate that there are no additional study area intersections anticipated to operate at an unacceptable LOS, in addition to those previously identified under Existing (2017) traffic conditions.

Opening Year Cumulative (2020) With Project Conditions

The addition of Project traffic is anticipated to result in a new deficiency at the intersection of Baldwin Avenue and Valley Boulevard (#10) and the v/c is anticipated to increase by 0.01 or more at the following intersections, resulting in a significant cumulative impact for Opening Year Cumulative (2020) With Project traffic conditions:

- Baldwin Av. & Valley Bl. (#10) – LOS E in the AM peak hour; v/c > 0.02 during the PM peak hour
- Baldwin Av. & Loftus Dr. (#11) – v/c > 0.01 or more during the AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – v/c > 0.01 during the PM peak hour
- Santa Anita Av. & Valley Bl. (#23) – v/c > 0.01 during the AM peak hour
- Peck Rd. & Lower Azusa Rd. (#27) – v/c > 0.01 during the AM peak hour

The recommended improvement at the intersection of Baldwin Avenue and Valley Boulevard is consistent with that recommended in the General Plan Update EIR. The recommendation is to modify Valley Boulevard from Garey Avenue to the eastern City limit to implement a six-lane roadway through restriping. This recommended improvement reduces the impact to less than significant.

The intersection of Baldwin Avenue and Loftus Drive was not analyzed in the General Plan Update EIR, however, intersections in close proximity to this location that were evaluated in the General Plan Update EIR were either identified with a deficiency or approaching a deficiency. As such, a deficiency at this location would likely have been identified if evaluated in the General Plan Update EIR.

Consistent with the recommended improvement in the General Plan Update EIR, eliminating the on-street parking and restriping the northbound approach to accommodate a 3rd northbound through lane would reduce the impact to less than significant at the intersection of Santa Anita Avenue and Lower Azusa Road.

In conjunction with the recommended northbound right turn lane from the General Plan Update EIR, a southbound right turn lane is also necessary at the intersection of Santa Anita Avenue and Valley Boulevard in order to reduce the impact to less than significant.

Lastly, the General Plan Update EIR did not identify any improvement needs for the intersection of Peck Road and Lower Azusa Road. A 2nd northbound left turn lane is necessary in order to reduce the impact to less than significant at the intersection of Peck Road and Lower Azusa Road.

Horizon Year (2035) Without Project Conditions

The following study area intersections are anticipated to operate at an unacceptable LOS during one or more peak hours under Horizon Year (2035) Without Project traffic conditions, in addition to those previously identified under Opening Year Cumulative (2020) Without Project traffic conditions:

- Ellis Ln. & Lower Azusa Rd. (#2) – LOS E AM peak hour only
- Baldwin Av. & Valley Bl. (#10) – LOS E AM and PM peak hours

Horizon Year (2035) With Project Conditions

The addition of Project traffic is not anticipated to result in any new deficiencies; however, the v/c is anticipated to increase by 0.01 or more at the following intersections, resulting in a significant cumulative impact for Horizon Year (2035) With Project traffic conditions:

- Baldwin Av. & Valley Bl. (#10) – v/c > 0.01 during the AM and PM peak hours
- Baldwin Av. & Loftus Dr. (#11) – v/c > 0.01 or more during the AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – v/c > 0.01 during the PM peak hour
- Santa Anita Av. & Valley Bl. (#23) – v/c > 0.01 during the AM peak hour

The recommended improvement at the intersection of Baldwin Avenue and Valley Boulevard is consistent with that recommended in the General Plan Update EIR. The recommendation is to modify Valley Boulevard from Garey Avenue to the eastern City limit to implement a six-lane roadway through restriping. This recommended improvement reduces the impact to less than significant.

The intersection of Baldwin Avenue and Loftus Drive was not analyzed in the General Plan Update EIR, however, intersections in close proximity to this location that were evaluated in the General Plan Update EIR were either identified with a deficiency or approaching a deficiency. As such, a deficiency at this location would likely have been identified if evaluated in the General Plan Update EIR.

Consistent with the recommended improvement in the General Plan Update EIR, eliminating the on-street parking and restriping the northbound approach to accommodate a 3rd northbound through lane would reduce the impact to less than significant at the intersection of Santa Anita Avenue and Lower Azusa Road.

In conjunction with the recommended northbound right turn lane from the General Plan Update EIR, a southbound right turn lane is also necessary at the intersection of Santa Anita Avenue and Valley Boulevard in order to reduce the impact to less than significant.

1.4.2 ROADWAY SEGMENTS

Existing (2017) Conditions

For Existing (2017) traffic conditions, the study area roadway segments are currently operating at an acceptable LOS.

E+P Conditions

The roadway segment analysis results indicate that the addition of Project traffic is not anticipated to result in any new roadway segment deficiencies, consistent with Existing (2017) traffic conditions.

Opening Year Cumulative (2020) Without Project Conditions

The roadway segment analysis results indicate that the study area intersections are anticipated to continue to operate at an acceptable LOS during the peak hours for Opening Year Cumulative (2020) Without Project traffic conditions.

Opening Year Cumulative (2020) With Project Conditions

The roadway segment analysis results indicate that the addition of Project traffic is not anticipated to result in any new roadway segment deficiencies, consistent with Existing (2017) traffic conditions. Thus, the impact is not cumulatively significant.

Horizon Year (2035) Without Project Conditions

The following study area roadway segments are anticipated to operate at an unacceptable LOS for Horizon Year (2035) traffic conditions:

- Lower Azusa Rd., Santa Anita Av. to Peck Rd. (#3) – LOS F Westbound AM peak hour only
- Baldwin Av., Valley Bl. to I-10 Freeway (#7) – LOS F Southbound AM peak hour only

Horizon Year (2035) With Project Conditions

The roadway segment analysis results indicate that the addition of Project traffic is not anticipated to result in any additional roadway segment deficiencies, in addition to those previously identified under Horizon Year (2035) Without Project traffic conditions. Thus, the impact is not cumulatively significant.

1.5 COMPARISON TO THE GENERAL PLAN AND ZONING CODE UPDATE EIR

1.5.1 INTERSECTIONS

The results of this analysis have been compared to the applicable analysis scenarios previously evaluated in the General Plan Update EIR to ensure there are no additional traffic impacts associated with the modified Project in comparison to the allowable land uses evaluated in the General Plan Update EIR. (1) For the study area intersections that overlap with the locations evaluated in the General Plan Update EIR, the addition of the modified Project results in the following five impacts (see Table 1-3):

- Baldwin Av. & Valley Bl. (#10) – LOS E in the AM peak hour; v/c > 0.02 during the PM peak hour
- Baldwin Av. & Loftus Dr. (#11) – v/c > 0.01 or more during the AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – v/c > 0.01 during the PM peak hour

- Santa Anita Av. & Valley Bl. (#23) – v/c > 0.01 during the AM peak hour
- Peck Rd. & Lower Azusa Rd. (#27) – v/c > 0.01 during the AM peak hour

The recommended improvement at the intersection of Baldwin Avenue and Valley Boulevard is consistent with that recommended in the General Plan Update EIR. The recommendation is to modify Valley Boulevard from Garey Avenue to the eastern City limit to implement a six-lane roadway through restriping. The same improvement is needed for E+P, Opening Year Cumulative (2020), and Horizon Year (2035) traffic conditions. There are no additional significant impacts anticipated, and no additional improvements beyond those identified in the General Plan Update EIR are necessary. This recommended improvement reduces the impact to less than significant.

The intersection of Baldwin Avenue and Loftus Drive was not analyzed in the General Plan Update EIR, however, intersections in close proximity to this location that were evaluated in the General Plan Update EIR were either identified with a deficiency or approaching a deficiency. As such, a deficiency at this location would likely have been identified if evaluated in the General Plan Update EIR. The recommendation at Baldwin Avenue and Loftus Drive is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane with a minimum of 100-feet of storage. The proposed improvement would reduce the v/c to below Without Project (or pre-project) traffic conditions and would therefore reduce the Project's cumulative impact to less than significant levels. The same improvement is needed for E+P, Opening Year Cumulative (2020), and Horizon Year (2035) traffic conditions.

The recommended improvement at the intersection of Santa Anita Avenue and Lower Azusa Road is consistent with that recommended in the General Plan Update EIR. The recommendation is to prohibit on-street parking during the peak hours and restripe the northbound approach with a 3rd northbound through lane. The same improvement is needed for E+P, Opening Year Cumulative (2020), and Horizon Year (2035) traffic conditions. There are no additional significant impacts anticipated, and no additional improvements beyond those identified in the General Plan Update EIR are necessary. These recommended improvements reduce the impact to less than significant.

The recommended improvements at the intersection of Santa Anita Avenue and Valley Boulevard are in excess of those recommended in the General Plan Update EIR. The General Plan Update EIR recommended a northbound right turn lane, however, a southbound right turn lane is also necessary in order to reduce the impact to less than significant levels. The same improvement is needed for E+P, Opening Year Cumulative (2020), and Horizon Year (2035) traffic conditions. There are no additional significant impacts anticipated. These recommended improvements reduce the impact to less than significant.

Although the intersection of Peck Road and Lower Azusa Road was evaluated in the General Plan Update EIR, no deficiency was identified in the EIR. The General Plan Update EIR identifies LOS E during the PM peak hour, however, no significant impact was identified and as a result, no improvements were identified at this location. Based on our understanding of the City's LOS criteria, LOS E (or worse) at the intersection of Peck Road and Lower Azusa Road is considered deficient. The addition of Project traffic is anticipated to result in a significant cumulative impact at the intersection of Peck Road and Lower Azusa Road for Opening Year Cumulative (2020) traffic

conditions only. The recommended improvement for the intersection of Peck Road and Lower Azusa Road for Opening Year Cumulative (2020) includes a 2nd northbound left turn lane. This recommended improvement reduces the impact to less than significant.

1.5.2 FAIR SHARE

In cases where this assessment identifies that the proposed Project would have a significant cumulative impact to a study area intersection, and the recommended mitigation measure is a fair share monetary contribution, the following methodology was applied to determine the fair share contribution. Although a fair share contribution has been identified, the impact would remain significant until such time the recommended improvement is implemented. The project's fair share contribution at an off-site study area intersection is determined based on the following equation, which is the ratio of project traffic to E+P, Opening Year Cumulative or Horizon Year traffic or the ratio of project traffic to net new traffic (whichever is applicable):

Project Fair Share % = Project Traffic / E+P or 2021 WP or 2035 WP Traffic

or

Project Fair Share % = Project Traffic / (2035 WP Traffic – Existing Traffic)

The detailed Project fair share contribution calculations are provided in Table 1-5.

1.5.3 ROADWAY SEGMENTS

The results of this analysis have been compared to the applicable analysis scenarios previously evaluated in the General Plan Update EIR to ensure there are no additional traffic impacts associated with the modified Project in comparison to the allowable land uses evaluated in the General Plan Update EIR. (1) For the study area roadway segments that overlap with the locations evaluated in the General Plan Update EIR, the addition of the modified Project results in the following two impacts under Horizon Year (2035) traffic conditions (see Table 1-4):

- Lower Azusa Rd., Santa Anita Av. to Peck Rd. (#3)
- Baldwin Av., Valley Bl. to I-10 Freeway (#7)

The segment of Lower Azusa Road between Santa Anita Avenue to Peck Road is deficient starting with Existing (2017) traffic conditions in the General Plan Update EIR. However, there is no additional right-of-way and restriping is not anticipated to improve the roadway capacity. As such, the General Plan Update EIR identified the impact would remain significant and unavoidable. This TIA also identifies the same deficiency for Horizon Year (2035) traffic conditions only, however, no improvements have been recommended for this segment as it has been determined there are no feasible improvements.

Table 1-3

Comparison of Recommended Intersection Improvements

#	Intersection	Existing Conditions		Opening Year Cumulative	Horizon Year (2035)		Consistent with General Plan EIR?
		General Plan	Current Study	Current Study	General Plan	Current Study	
10	Baldwin Av. & Valley Bl.	- No deficiency	- No deficiency	- Modification of Valley Boulevard from Garvey Avenue to the eastern City limit to implement a six-lane roadway through restriping	- Modification of Valley Boulevard from Garvey Avenue to the eastern City limit to implement a six-lane roadway through restriping	- Same	Yes
11	Baldwin Av. & Loftus Dr.	- Not an analysis location[3]	- Recommendation is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane (100-feet of storage)	- Recommendation is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane	- Not an analysis location[3]	- Recommendation is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane	Yes[4]
22	Santa Anita Av. & Lower Azusa Rd.	- Restripe to accommodate a 3rd NB through lane. Prohibit on-street parking in conjunction with this improvement	- Same	- Restripe to accommodate a 3rd NB through lane. Prohibit on-street parking in conjunction with this improvement	- Restripe to accommodate a 3rd NB through lane. Prohibit on-street parking in conjunction with this improvement	- Same	Yes
23	Santa Anita Av. & Valley Bl.	- Construct a NB right turn lane	- Same - Construct a SB right turn lane	- Same - Construct a SB right turn lane	- Construct a NB right turn lane	- Same - Construct a SB right turn lane	No
27	Peck Rd. & Lower Azusa Rd.	- No deficiency	- Less than significant	- 2nd NB left turn lane	- No deficiency	- Less than significant	No

[1] Improvements identified from the City of El Monte General Plan and Zoning Code Update Draft EIR, May 2011.

[2] Currently Exists = Improvement has been constructed and current exists; Not Applicable = Improvement was not needed to achieve acceptable LOS; Same = Same improvement as identified in the General Plan.

[3] Although not evaluated in the General Plan, intersections in close proximity to this location were evaluated in the General Plan and either identified a deficiency or approaching a deficiency. As such, it has been assumed that a deficiency at this location would likely have been identified if evaluated.

[4] When compared to the impacts reported by the General Plan Update EIR's traffic results, the Project would result in a net reduction in the ICU at the intersection of Baldwin Av. & Loftus Dr. This is because the Project's proposed high-cube warehousing use would generate less traffic than the blended trip rate for general light industrial, industrial park, manufacturing, and warehousing uses that was assumed for the Project site in the General Plan Update EIR's traffic analysis. Thus, although improvements are recommended to reduce the v/c at the intersection of Baldwin Av. & Loftus Dr., the improvements are not considered mitigation under CEQA to address a new or more severe impact because the Project's ICU at the intersection of Baldwin Av. & Loftus Dr. would actually be reduced as compared to ICU reported by the General Plan Update EIR traffic analysis. Although this intersection was not specifically discussed in the General Plan Update EIR, according to the General Plan Update EIR's traffic analysis, the Project's traffic impacts are clearly within the scope of analysis of the General Plan Update EIR and the Project would not result in any new impacts or increase the severity of a previously-identified significant impact as analyzed in the General Plan Update EIR.

Table 1-4

Project Fair Share Calculations

#	Intersection		Existing	Project	E+P	2020 WP	2035 WP	Net New Trips	Fair Share %[1]
8	Baldwin Av. & Gidley St.								
		AM:	2,154	110	--	--	2,464	310	35.48%
		PM:	2,041	137	--	--	2,367	326	**42.02%**
10	Baldwin Av. & Valley Bl.								
		AM:	4,127	103	--	--	4,612	485	21.24%
		PM:	4,233	129	--	--	4,754	521	**24.76%**
11	Baldwin Av. & Loftus Dr.								
		AM:	2,901	64	--	--	3,234	333	19.22%
		PM:	3,930	89	--	--	4,383	453	19.65%
12	Baldwin Av. & Flair Dr.								
		AM:	2,587	41	--	--	2,868	281	14.59%
		PM:	2,474	51	--	--	2,754	280	**18.21%**
22	Santa Anita Av. & Lower Azusa Rd.								
		AM:	3,987	18	4,005	--	--	--	0.45%
		PM:	4,236	22	4,258	--	--	--	**0.52%**
23	Santa Anita Av. & Valley Bl.								
		AM:	4,078	26	4,104	--	--	--	**0.63%**
		PM:	3,836	23	3,859	--	--	--	0.60%
27	Peck Rd. & Lower Azusa Rd.								
		AM:	4,392	18	--	4,500	--	--	0.40%
		PM:	4,192	22	--	4,323	--	--	**0.51%**
	Segment of Baldwin Av. (Valley Bl. to I-10)								
		ADT:	31,520	1,188	--	--	35,629	--	**3.33%**

[1] Highest fair share percentage is highlighted.

Table 1-5

Comparison of Recommended Roadway Segment Improvements

#	Roadway	Segment Limits	Existing Conditions		Horizon Year (2035)		Consistent with General Plan EIR?
			General Plan	Current Study	General Plan	Current Study	
3	Lower Azusa Rd.	Santa Anita Av. to Peck Rd.	- Deficient but no improvements recommended[3]	- No deficiency	- Deficient but no improvements recommended[3]	- Same	Yes
7	Baldwin Av.	Valley Bl. to I-10 Freeway	- No deficiency	- No deficiency	- No deficiency, however, improve Baldwin Av. with 3 lanes southbound and 2 lanes northbound	- Deficient; same improvement	Yes

[1] Improvements identified from the City of El Monte General Plan and Zoning Code Update Draft EIR, May 2011.

[2] Currently Exists = Improvement has been constructed and current exists; Not Applicable = Improvement was not needed to achieve acceptable LOS; Same = Same improvement as identified in the General Plan.

[3] The City's General Plan recognizes a deficiency on this segment, however, there is no additional right of way and restriping is not anticipated to improve capacity. As such, the impacts would remain significant and unavoidable.

The recommended improvement along the segment of Baldwin Avenue between Valley Boulevard and the I-10 Freeway is consistent with that recommended in the General Plan Update EIR. The recommendation is to improve the roadway segment with 3 southbound lanes and 2 northbound lanes for a 5-lane section south of Valley Boulevard. The same roadway segment improvement is needed for Horizon Year (2035) traffic conditions only. Although the General Plan Update EIR did not identify a deficiency along this roadway segment for Horizon Year (2035) traffic conditions, the improvement was identified as Baldwin Avenue is a Major Arterial. Although the General Plan Update EIR did not identify a deficiency along this roadway segment for Horizon Year (2035) traffic conditions, the General Plan Update EIR assumed that Baldwin Avenue would be improved as a Major Arterial consistent with the recommendations provided herein.

1.7 ON-SITE ROADWAY AND SITE ACCESS IMPROVEMENTS

The Project is proposed to access Shirley Avenue via three driveways on Shirley Avenue and two driveways on Lower Azusa Road. Regional access to the Project site will be provided by the I-10 Freeway via Temple City Boulevard, Baldwin Avenue, and Santa Anita Avenue and I-605 Freeway via Lower Azusa Road. Roadway improvements necessary to provide site access and on-site circulation are assumed to be constructed in conjunction with site development and are described below. These improvements are anticipated to be in place prior to Project building occupancy.

The proposed Project is located on the southeast corner of Shirley Avenue and Lower Azusa Road where there is an existing warehouse building. The site will be redeveloped with the proposed modified Project. As such, the site adjacent roadways of Shirley Avenue and Lower Azusa Road are currently constructed to their ultimate cross-sections. However, the Project will make necessary curb and gutter improvements in order to accommodate the proposed driveways.

The recommended site access driveway improvements for the Project are described below. Exhibit 1-3 illustrates the site access driveway improvement recommendations. Construction of on-site and site adjacent improvements shall occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

Shirley Avenue & Driveway 1 (#14) – Install a stop control on the westbound approach and construct the intersection with the following geometrics:

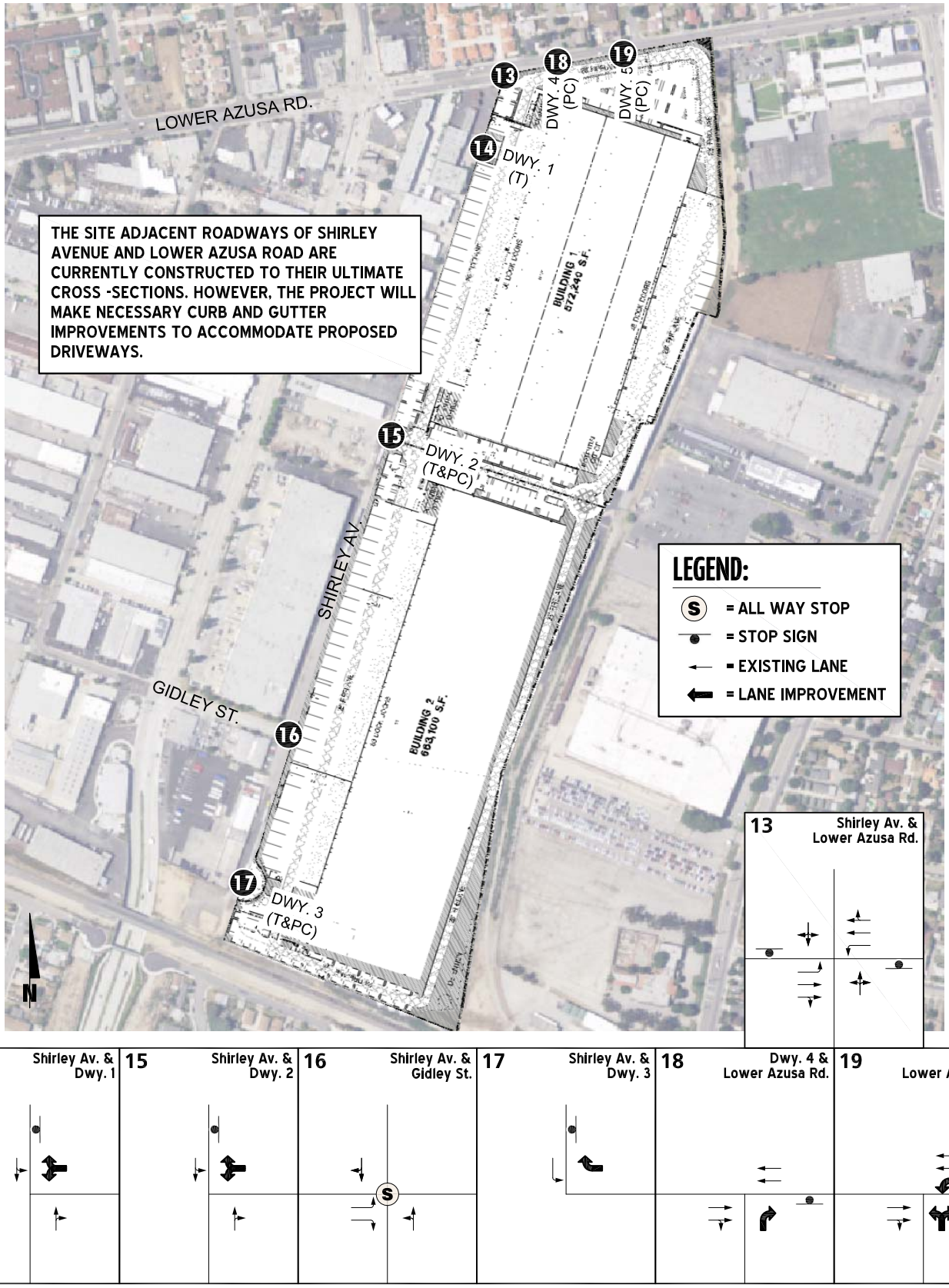
Northbound Approach: One shared through-right turn lane.

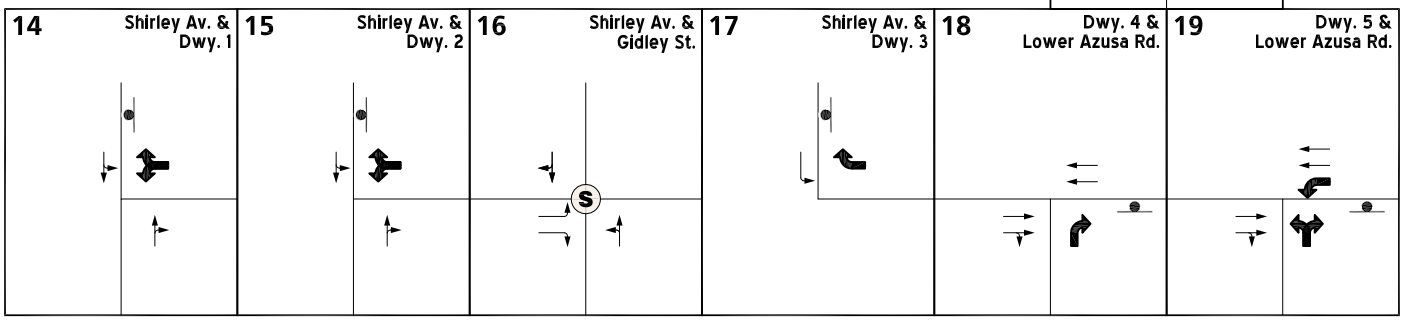
Southbound Approach: One shared left-through lane.

Eastbound Approach: Not Applicable (N/A)

Westbound Approach: One shared left-right turn lane.

EXHIBIT 1-3: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS





Shirley Avenue & Driveway 2 (#15) – Install a stop control on the westbound approach and construct the intersection with the following geometrics:

Northbound Approach: One shared through-right turn lane.

Southbound Approach: One shared left-through lane.

Eastbound Approach: N/A

Westbound Approach: One shared left-right turn lane.

Shirley Avenue & Gidley Street (#16) – The intersection is currently a four-leg intersection where the eastern leg serves as a driveway to the existing warehouse use. However, the modified Project will eliminate this driveway and the intersection will be modified to a three-leg intersection (no access to the site). Maintain the existing all-way stop control at the intersection and the following geometrics:

Northbound Approach: One shared left-through lane.

Southbound Approach: One shared through-right turn lane.

Eastbound Approach: One left turn lane and one right turn lane.

Westbound Approach: N/A

Shirley Avenue & Driveway 3 (#17) – Install a stop control on the westbound approach and construct the intersection with the following geometrics:

Northbound Approach: N/A

Southbound Approach: One left turn lane.

Eastbound Approach: N/A

Westbound Approach: One right turn lane.

Driveway 4 & Lower Azusa Road (#18) – Install a stop control on the northbound approach and construct the intersection with the following geometrics:

Northbound Approach: One right turn lane.

Southbound Approach: N/A

Eastbound Approach: One through lane and one shared through-right turn lane.

Westbound Approach: Two through lanes.

Driveway 5 & Lower Azusa Road (#19) – Install a stop control on the northbound approach and construct the intersection with the following geometrics:

Northbound Approach: One shared left-through-right turn lane.

Southbound Approach: One shared left-through-right turn lane.

Eastbound Approach: One left turn lane, one through lane, and one shared through-right turn lane.

Westbound Approach: One left turn lane, one through lane, and one shared through-right turn lane.

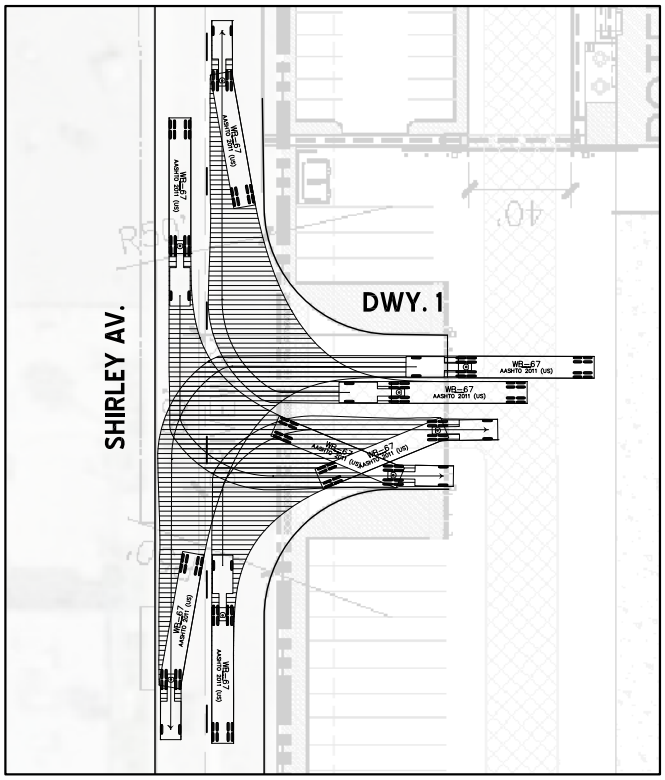
On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the Project site.

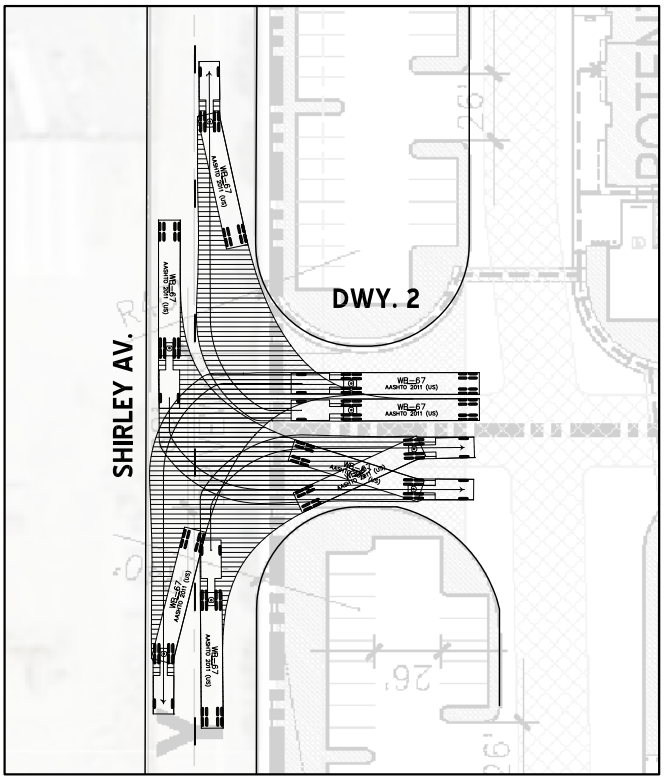
Sight distance at each project access point should be reviewed with respect to standard Caltrans and sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

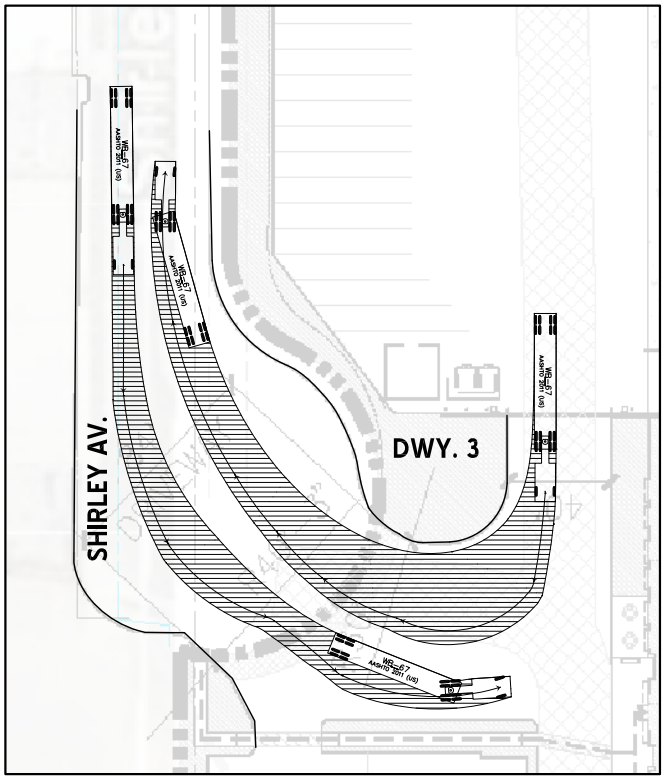
1.8 TRUCK ACCESS AND CIRCULATION

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at each applicable Project driveway and site adjacent intersection anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-4). As shown, Driveways 1, 2, and 3 (all which provide access for heavy trucks) are anticipated to accommodate the turning movements of heavy trucks based on the design shown on the preliminary site plan.

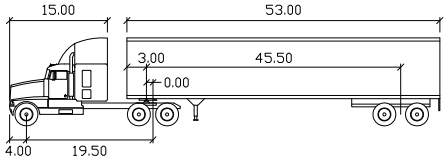
EXHIBIT 1-4: TRUCK ACCESS







LEGEND:



WB-67 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

GRAPHIC SCALE
0 75 150
1"=75'

2 METHODOLOGIES

This section documents the methodologies and assumptions used to perform this traffic assessment.

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. LOS analysis was conducted to determine existing traffic conditions using the Intersection Capacity Utilization (ICU) methodology for signalized study intersections in the Cities of Irwindale, Duarte, and Azusa. (5) The 2010 Highway Capacity Manual (HCM) methodology was used to determine LOS's for unsignalized intersections in those cities. In addition, in accordance with Caltrans' guidelines, 2010 HCM methodology was used for ramp-to-arterial study area intersections. (6) The HCM 2010 methodology expresses the LOS at an intersection in terms of average control delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

City of El Monte, City of Temple City, City of Rosemead, City of Arcadia

The City of El Monte, Temple City, Rosemead, and Arcadia require signalized intersections to be evaluated through ICU analysis which compares the peak hour traffic volumes to intersection capacity. Lane capacities of 1,600 vehicles per hour of green time have been assumed for the ICU calculations. 0.10 of volume-to-capacity (v/c) assumed representing 10 seconds of delay for the yellow and all-red signal indication and inherent vehicle delay between cycles with an assumed signal cycle of 100 seconds. The ICU LOS definitions based on v/c ratio are presented in Table 2-1.

TABLE 2-1 INTERSECTION CAPACITY UTILIZATION (ICU) LOS DEFINITIONS

Level of Service	Critical Volume To Capacity Ratio
A	0.00 - 0.60
B	0.61 - 0.70
C	0.71 - 0.80
D	0.81 - 0.90
E	0.91 - 1.00
F	>1.00

Source: 2010 LA County CMP

California Department of Transportation (Caltrans)

Per the Caltrans Guide for the Preparation of Traffic Impact Studies, the traffic modeling and signal timing optimization software package Synchro (Version 9.1) has also been utilized to analyze signalized intersections under Caltrans' jurisdiction, which include interchange to arterial ramps (i.e. I-10 Freeway ramps at Temple City Boulevard, Baldwin Avenue, and Santa Anita Avenue). (3) Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The LOS and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes at all study area intersections. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g. PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios, with the exception of Horizon Year traffic conditions. Per Chapter 4 of the HCM 2010, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (6) In an effort to conduct a conservative analysis, a PHF of 0.92 has been utilized for Horizon Year traffic conditions unless the PHF is higher for Existing conditions.

TABLE 2-2: SIGNALIZED INTERSECTION DESCRIPTION OF LOS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up	F	F

Source: HCM 2010

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of El Monte, Temple City, Rosemead, and Arcadia require the operations of unsignalized intersections be evaluated using the methodology described in Chapter 19, Chapter 20, Chapter 32 of the HCM 2010. (6) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-3).

TABLE 2-3: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM 2010

At two-way or side-street stop-controlled intersections, The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole. For all-way stop controlled intersections, LOS is based solely on control delay for assessment of LOS at the approach and intersection levels.

2.3 ROADWAY SEGMENT CAPACITY ANALYSIS

Roadway segment operations have been evaluated using the City of El Monte roadway segment capacity thresholds provided in Table 5.13-2 of the General Plan Update EIR. (1) Per the City of El Monte's General Plan, roadway segments within the study area should maintain LOS D capacities along City roadways with the exception that LOS E may be allowed at intersections/roadways:

- At or adjacent to freeway ramps
- On major corridors and transit routes
- On truck routes
- In or Adjacent to the Downtown and major commercial districts

The roadway segment analysis prepared for the purposes of this TIA evaluated both the AM and PM peak hours by direction for each roadway segment. LOS is determined based on the v/c ratio, for each roadway segment by direction and peak hour. This methodology is consistent with that utilized in the General Plan Update EIR.

2.4 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TIA uses the signal warrant criteria presented in the latest edition of the Federal Highway Administration's (FHWA) Manual on Uniform Traffic Control Devices (MUTCD), as amended by *the* MUTCD 2014 California Supplement, for all study area intersections. (7)

The signal warrant criteria for Existing conditions are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. Both the FHWA's MUTCD and the MUTCD 2014 California Supplement indicate that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (7) Specifically, this TIA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 criteria are basically identical for both the FHWA's MUTCD and the MUTCD 2014 California Supplement. Warrant 3 is appropriate to use for this TIA because it provides specialized warrant criteria for intersections with rural characteristics (e.g. located in communities with populations of less than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future unsignalized intersections have been assessed regarding the potential need for new traffic signals based on future ADT volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Traffic signal warrant analyses were performed for the following study area intersections shown on Table 2-4:

TABLE 2-4: UNSIGNALIZED INTERSECTION LOCATIONS

ID	Intersection Location	Jurisdiction
2	Kauffman Av./Ellis Ln. & Lower Azusa Rd.	El Monte, Temple City
5	Temple City Bl. & Olney St.	Rosemead
12	Baldwin Av. & I-10 Eastbound Ramps	Caltrans, El Monte
13	Shirley Av. & Lower Azusa Rd.	El Monte, Temple City
14	Shirley Av. & Driveway 1 – Future Intersection	El Monte
15	Shirley Av. & Driveway 2 – Future Intersection	El Monte
16	Shirley Av. & Gidley St.	El Monte
17	Shirley Av. & Driveway 3 – Future Intersection	El Monte
19	Driveway 5 & Lower Azusa Rd. – Future Intersection	El Monte, Temple City

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 Existing Conditions of this report. The traffic signal warrant analysis for future conditions is presented in Section 5 *E+P Traffic Analysis*, Section 6 *Opening Year Cumulative (2020) Traffic Analysis*, and Section 7 *Horizon Year (2035) Traffic Analysis* of this report.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.5 MINIMUM LEVEL OF SERVICE (LOS) AND THRESHOLD OF SIGNIFICANCE

The definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions.

A direct impact was found to occur if an intersection operating at an acceptable LOS under pre-project conditions is anticipated to operate at a deficient LOS with the addition of Project traffic. However, if the intersection is operating at a deficient LOS under pre-project traffic conditions and the addition of Project traffic increases the v/c or delay by the values identified below, then the impact is considered cumulatively considerable.

2.5.1 CITY OF EL MONTE AND CITY OF ROSEMEAD

To determine whether the addition of project traffic at a study intersection results in a significant project-related impact, the following thresholds of significance will be utilized (consistent with the Los Angeles County Traffic Study Guidelines): (2)

A significant impact occurs at a signalized study area intersection, if the addition of Project traffic results in the intersection operations to go from LOS D/LOS E (i.e., acceptable) to LOS E or F, or if the addition of Project traffic increases the v/c by the following values:

Significant Impact Threshold for Signalized Intersctions		
Level of Service	Volume/Capacity	Incremental Increase
C	0.71-0.80	0.04 or more
D	0.81-0.90	0.02 or more
E/F	0.91-more	0.01 or more

A significant impact occurs at an unsignalized study area intersection, if the addition of Project traffic results in the intersection operations to go from LOS D/LOS E (i.e., acceptable) to LOS E or F, or if the addition of Project traffic increases the delay by the following values:

Significant Impact Threshold for Non Signalized Intersections	
Level of Service	Delay Increase
E	2 seconds
F	1 second

The proposed significance thresholds will be applied at study area intersections for the purposes of determining project-related impacts.

2.5.2 City of Temple City

The following LOS significance criteria, as approved by the City of Temple City, will be used to determine if the Project causes significant impacts to roadway segments and intersections. LOS standards for roadways and intersections in Temple City are classified into three categories. These 3 categories help develop a more sensitive approach to traffic planning so that streets with different purposes, functions, and in different neighborhoods have different thresholds. The minimum acceptable LOS and threshold of significance for intersections and roadway segments for each category are shown below:

Category	Intersections	Roadway Segments
Category A	NONE	NONE
Category B	MODERATE: LOS degrades to F, or V/C increases by 0.02 or more if already F	MODERATE: LOS degrades to E/F, or V/C increases by 0.02 or more if already E/F
Category C	MINIMAL: LOS degrades to E/F, or V/C increases by 0.02 or more if already E/F	MINIMAL: LOS degrades to D/E/F, or V/C increases by 0.02 or more if already D/E/F

Since Category C roadway segments and intersections are auto-centric and serve single family areas it is expected that they should not experience a great deal of change, and therefore, they should have a minimum acceptable LOS of D at intersections and C for roadway segments. Category B roadway segments and intersections are expected to experience moderate levels of change. These roadways serve multi and single family residential areas and should have a minimum acceptable LOS of E at intersections and D for roadway segments. Category A streets are areas where a great deal of change is anticipated. Since the street will be serving multiple users, the areas are expected to see more economic activity, and the street will be designed in a sustainable manner, these intersections and roadway segments should have a minimum acceptable LOS of F.

2.5.3 CITY OF ARCADIA

The City of Arcadia General Plan requires that LOS D or better be maintained on Arterial Streets with certain exceptions. The Circulation Element states that LOS D performance standard will apply City-wide, except at the following locations, where LOS E is permitted:

- Intersections/roadways at or adjacent to freeway ramps
- Intersections/roadways adjacent to Santa Anita Park and all roadway links intended to carry race-related traffic during racing season
- Intersections/roadways at or adjacent to the Downtown, Baldwin Avenue, and Live Oak Avenue commercial and mixed-use districts.

Pursuant to the City of Arcadia General Plan Update Standard Condition 4.15-9 (SC 4.15-9), future development in the City and other public projects shall comply with the CMP requirements for preparation of Traffic Impact Analysis. Thus, in order to determine whether the addition of Project traffic at a study area intersection results in a significant impact, the following thresholds of significance consistent with LA County CMP (see Chapter 5, Section 5.2.4, Page 47 of the 2010 Congestion Management Program) have been utilized at all study area intersections in the City of Arcadia. The LA County CMP specifies that the acceptable LOS on CMP facilities is LOS E.

- A significant impact occurs when a proposed Project increases traffic demand at a signalized study area intersection by two or more percent compared to the total intersection capacity (v/c > 0.02), causing or worsening LOS F (v/c > 1.00).

2.5.4 CALTRANS

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway System (SHS) facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. Consistent with the City of El Monte minimum LOS of LOS D, LOS D will be used as the target LOS for both arterial-to-freeway ramps and freeway mainline segments and ramp junctions.

Based on the criteria outlined above, all of the study area intersections are anticipated to allow a minimum LOS of D. To determine whether the addition of Project traffic to the SHS freeway segments would result in a deficiency, the following criteria were utilized:

- The addition of Project traffic would cause LOS of a freeway segment to degrade from D or better to E or F.
- The addition of Project traffic would exacerbate an already deficient condition. A segment that is operating at or near capacity is deemed to be deficient.

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3 EXISTING CONDITIONS

This section provides a summary of the existing circulation network, the City of El Monte General Plan Circulation Network, and a review of existing peak hour intersection operations, roadway segment, and traffic signal warrant analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with City of El Monte staff (Appendix 1.1), the study area includes a total of 27 existing and future intersections as shown on Exhibit 1-2. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF EL MONTE GENERAL PLAN CIRCULATION ELEMENT

Exhibit 3-2 shows the City of El Monte General Plan Circulation Element, and Exhibit 3-3 illustrates the City of El Monte General Plan roadway cross-sections.

Major Arterial: Major Arterials in the City of El Monte General Plan Circulation Network have a roadway cross-section of 104-110 feet of right-of-way with a curb-to-curb measurement of 80-86-feet. Study area roadways classified as a Major Arterial are as follows: Baldwin Avenue, Valley Boulevard, Santa Anita Avenue, Peck Road.

Secondary Arterial: Secondary Arterials in the City of El Monte General Plan Circulation Network have a roadway cross-section of 100 feet of right-of-way with a curb-to-curb measurement of 76-feet. Study area roadways classified as a Secondary Arterial are as follows: Lower Azusa Road, Arden Drive, and Ramona Boulevard.

3.3 CITY OF TEMPLE CITY GENERAL PLAN CIRCULATION ELEMENT

Exhibit 3-4 shows the City of Temple City General Plan Circulation Element, and Exhibit 3-5 illustrates the City of Temple City General Plan roadway cross-sections.

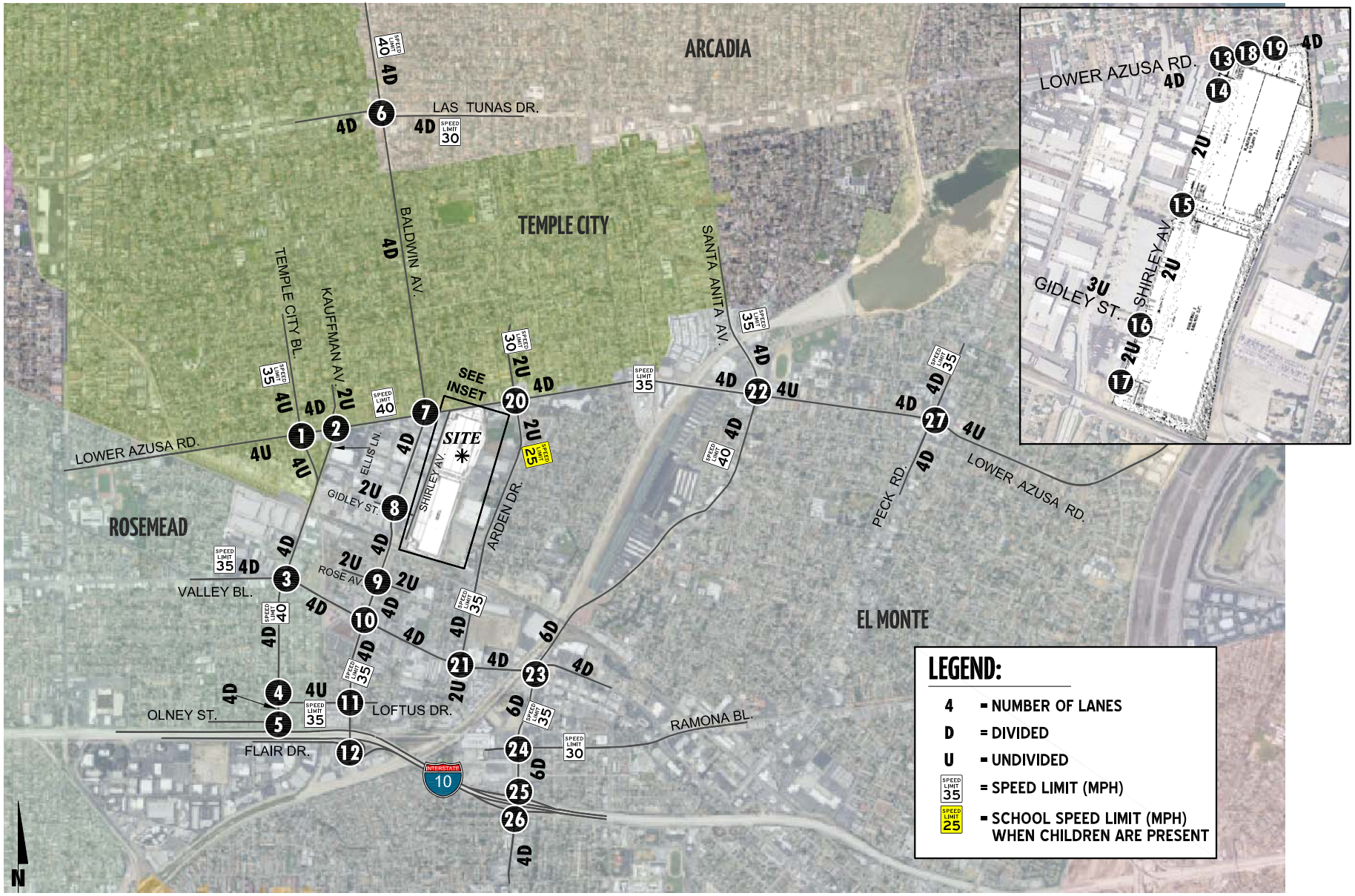
3.4 CITY OF ARCADIA GENERAL PLAN CIRCULATION ELEMENT

Exhibit 3-6 shows the City of Arcadia General Plan Circulation Element, and Exhibit 3-7 illustrates the City of Arcadia General Plan roadway cross-sections.

3.6 CITY OF ROSEMEAD GENERAL PLAN CIRCULATION ELEMENT

Exhibit 3-8 shows the City of Rosemead General Plan Circulation Element.

EXHIBIT 3-1 (1OF2): EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS



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URBAN CROSSROADS

EXHIBIT 3-1 (2OF2): EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS

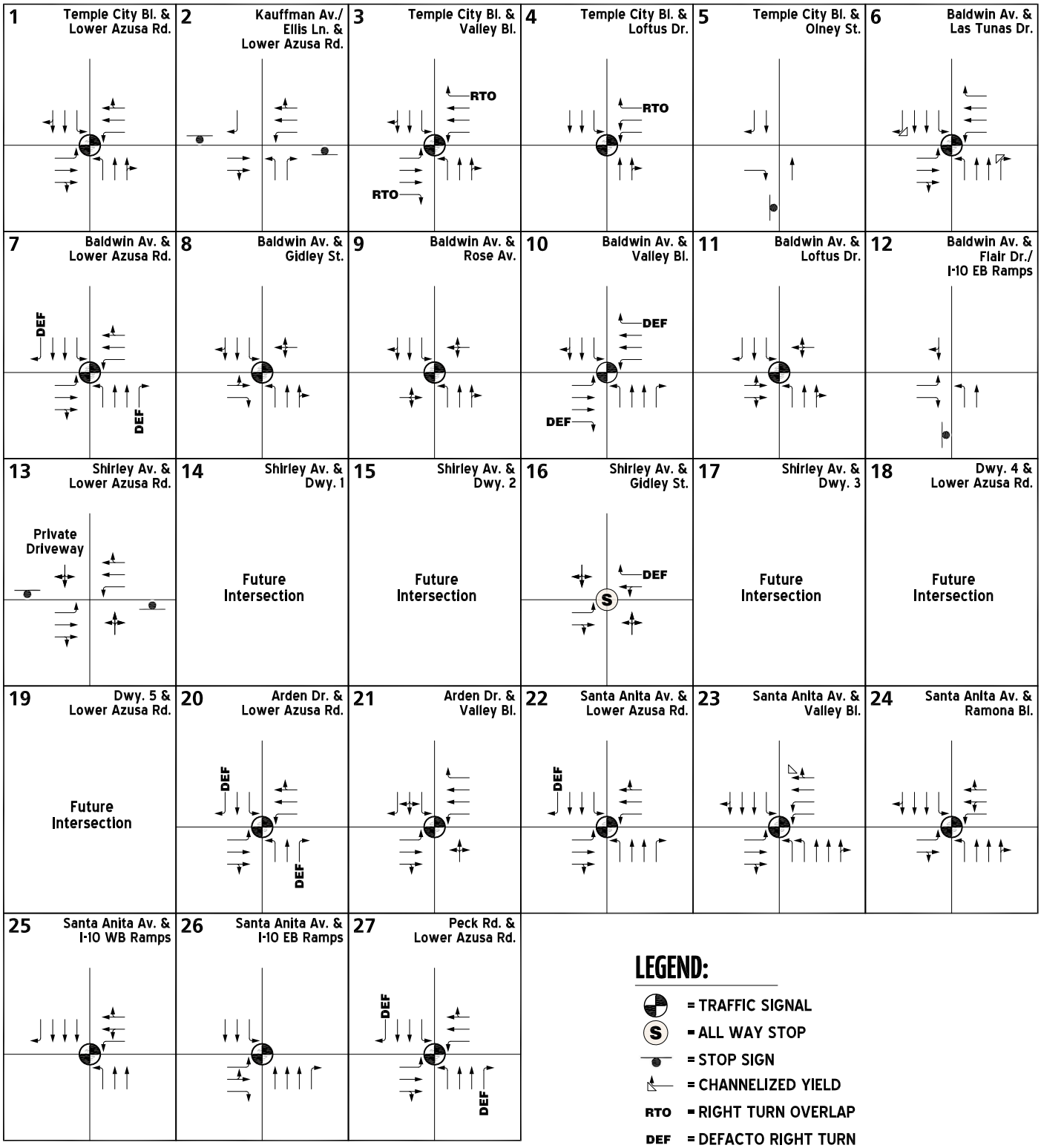

EXHIBIT 3-2: CITY OF EL MONTE GENERAL PLAN CIRCULATION ELEMENT

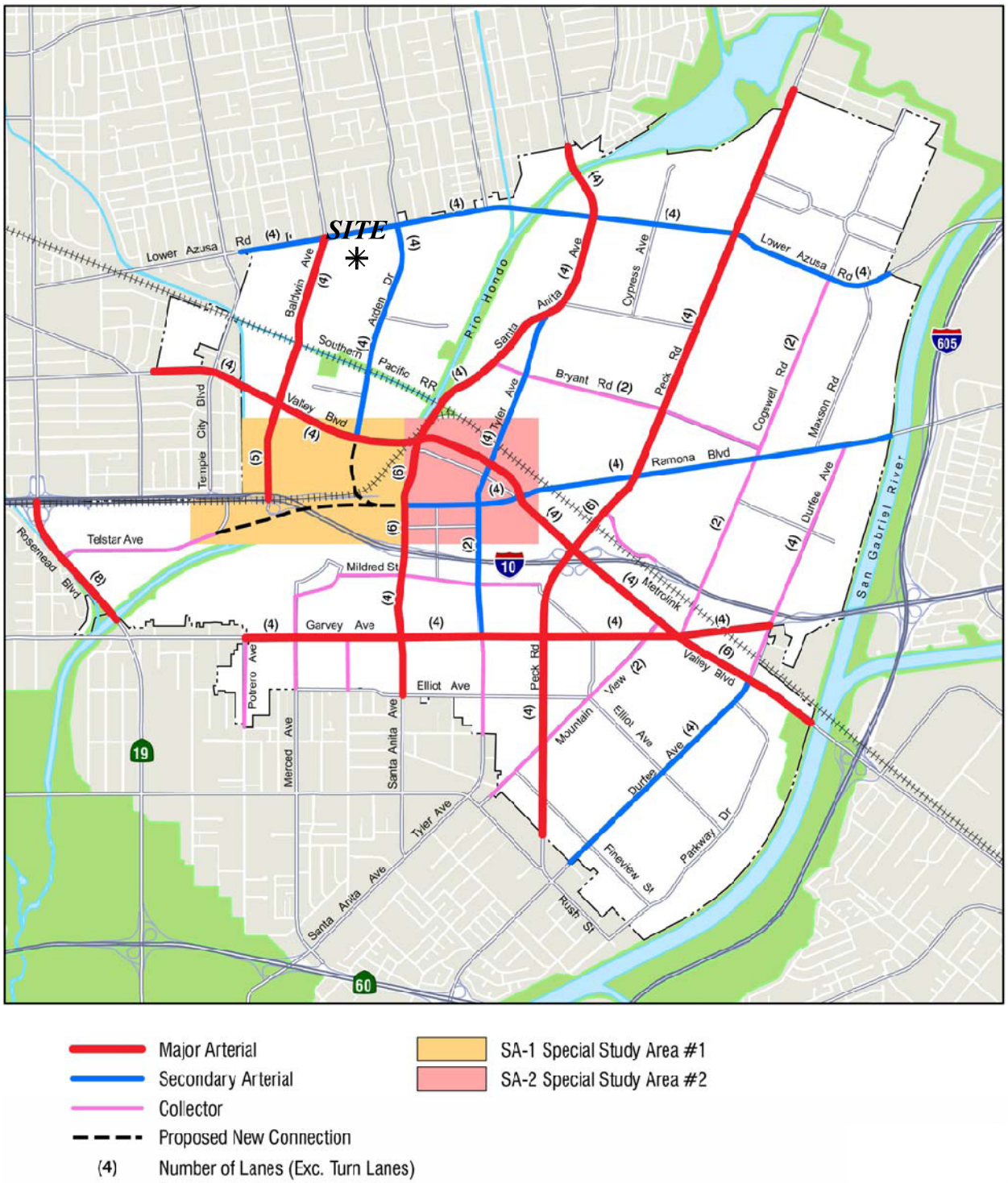

EXHIBIT 3-3: CITY OF EL MONTE GENERAL PLAN ROADWAY CROSS-SECTIONS

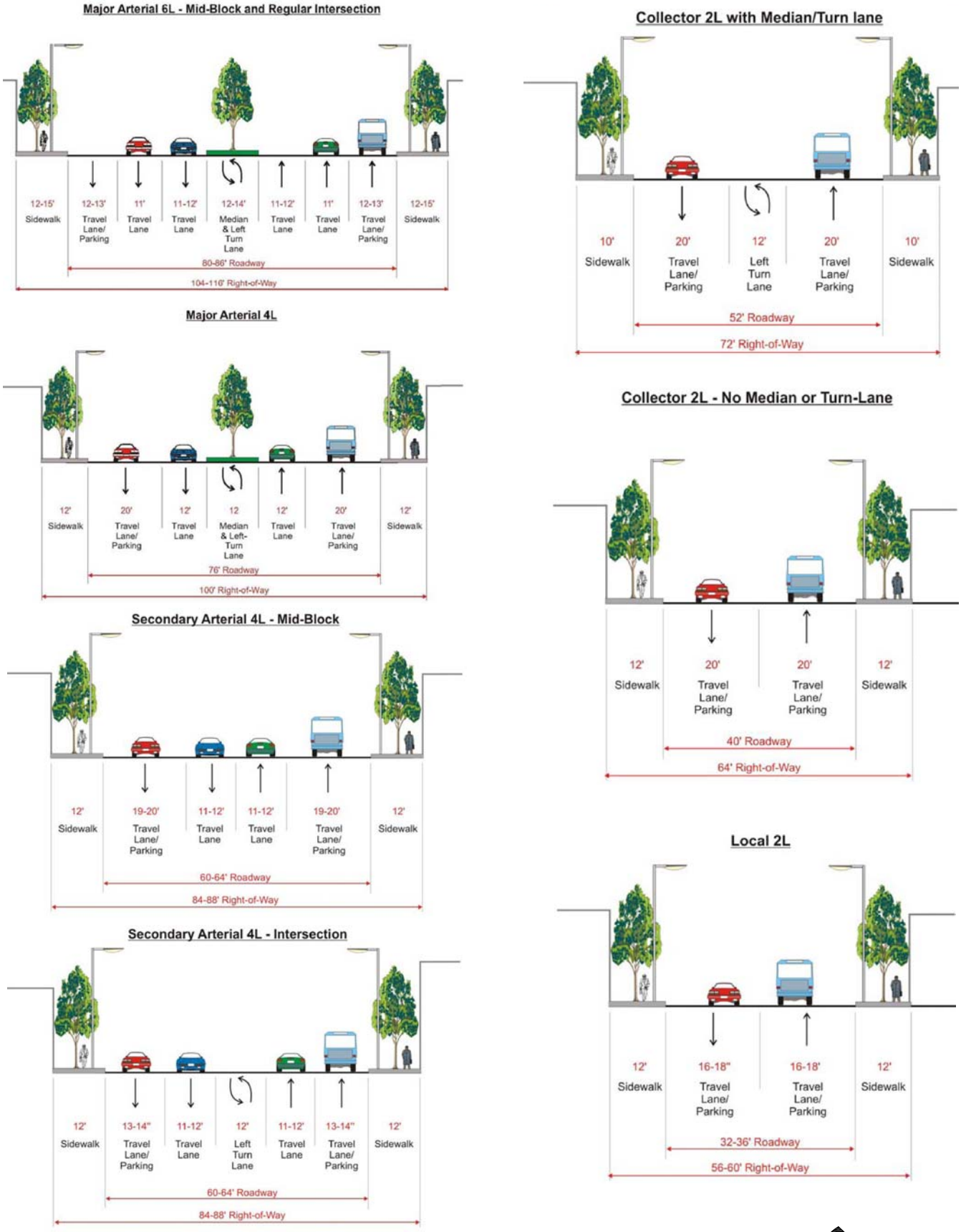

EXHIBIT 3-4: CITY OF TEMPLE CITY GENERAL PLAN CIRCULATION ELEMENT

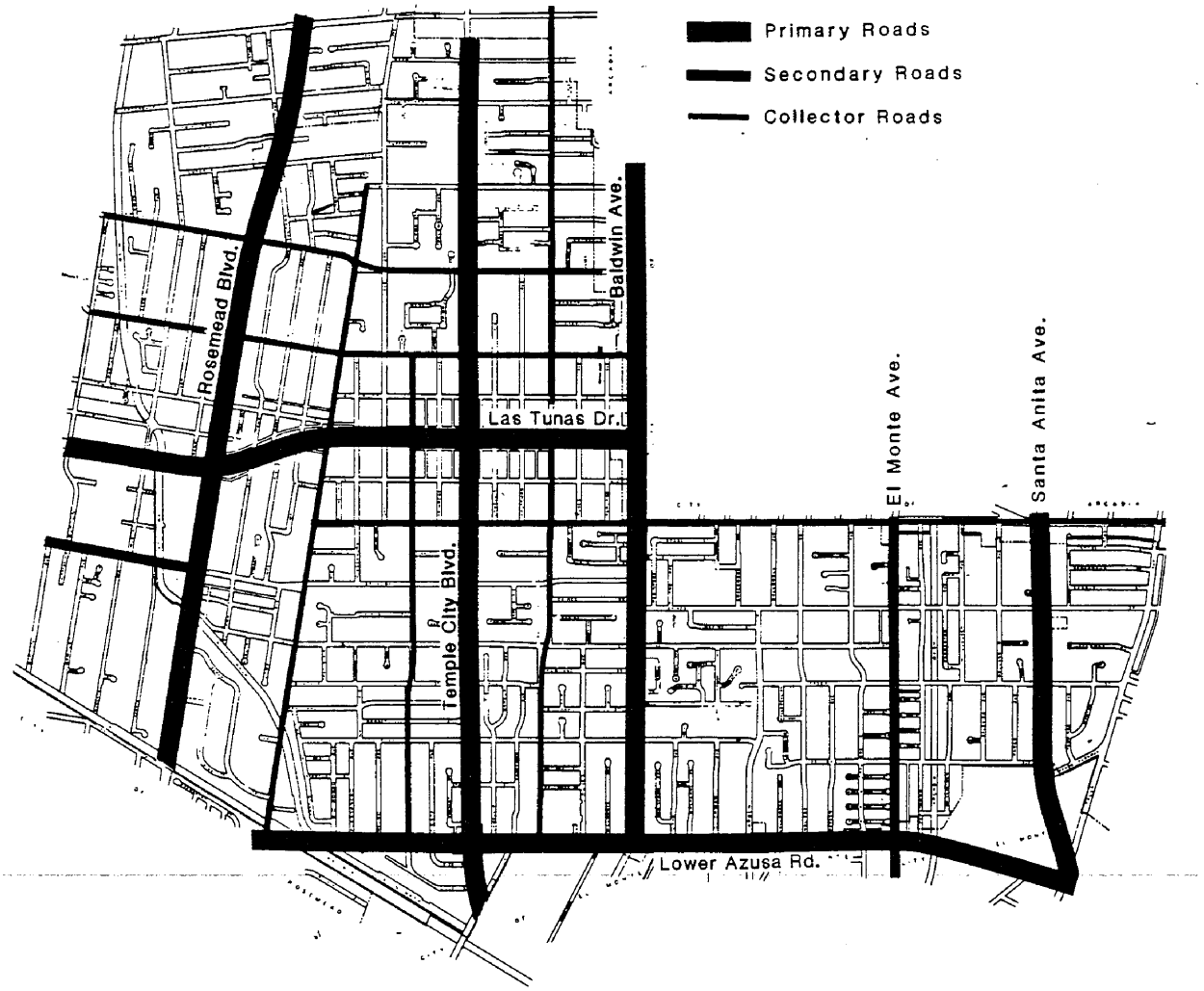

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EXHIBIT 3-5: CITY OF TEMPLE CITY GENERAL PLAN ROADWAY CROSS-SECTIONS

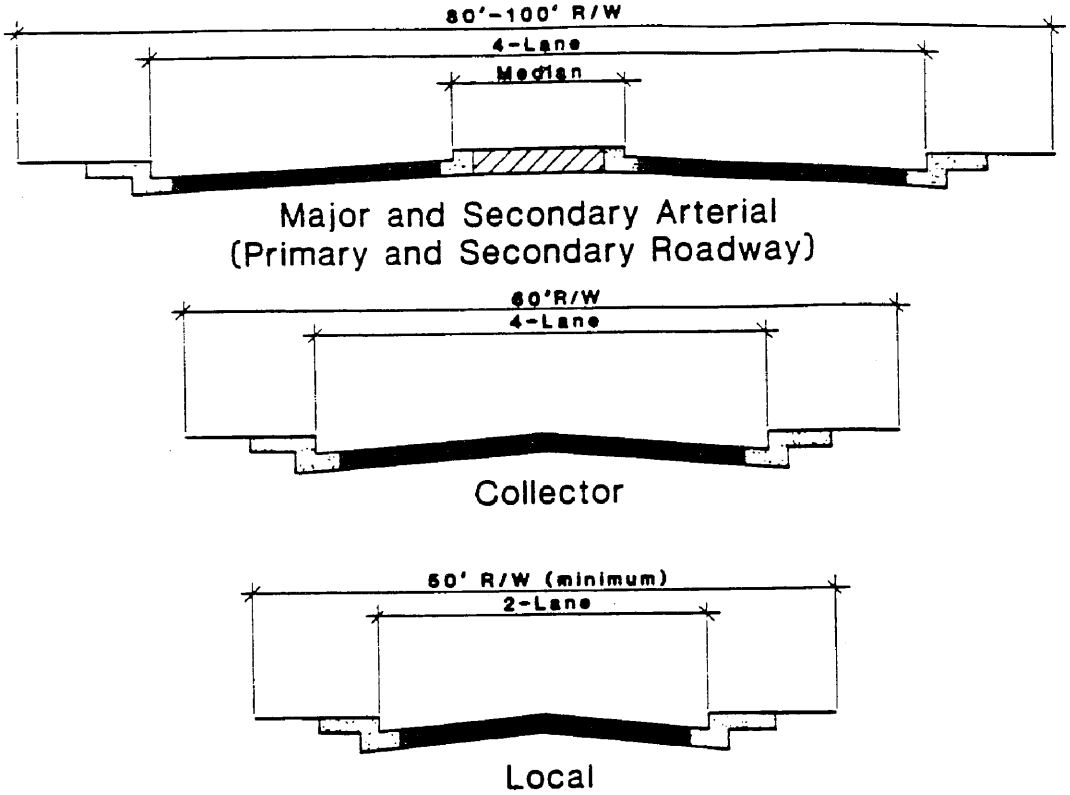


EXHIBIT 3-6: CITY OF ARCADIA GENERAL PLAN CIRCULATION ELEMENT

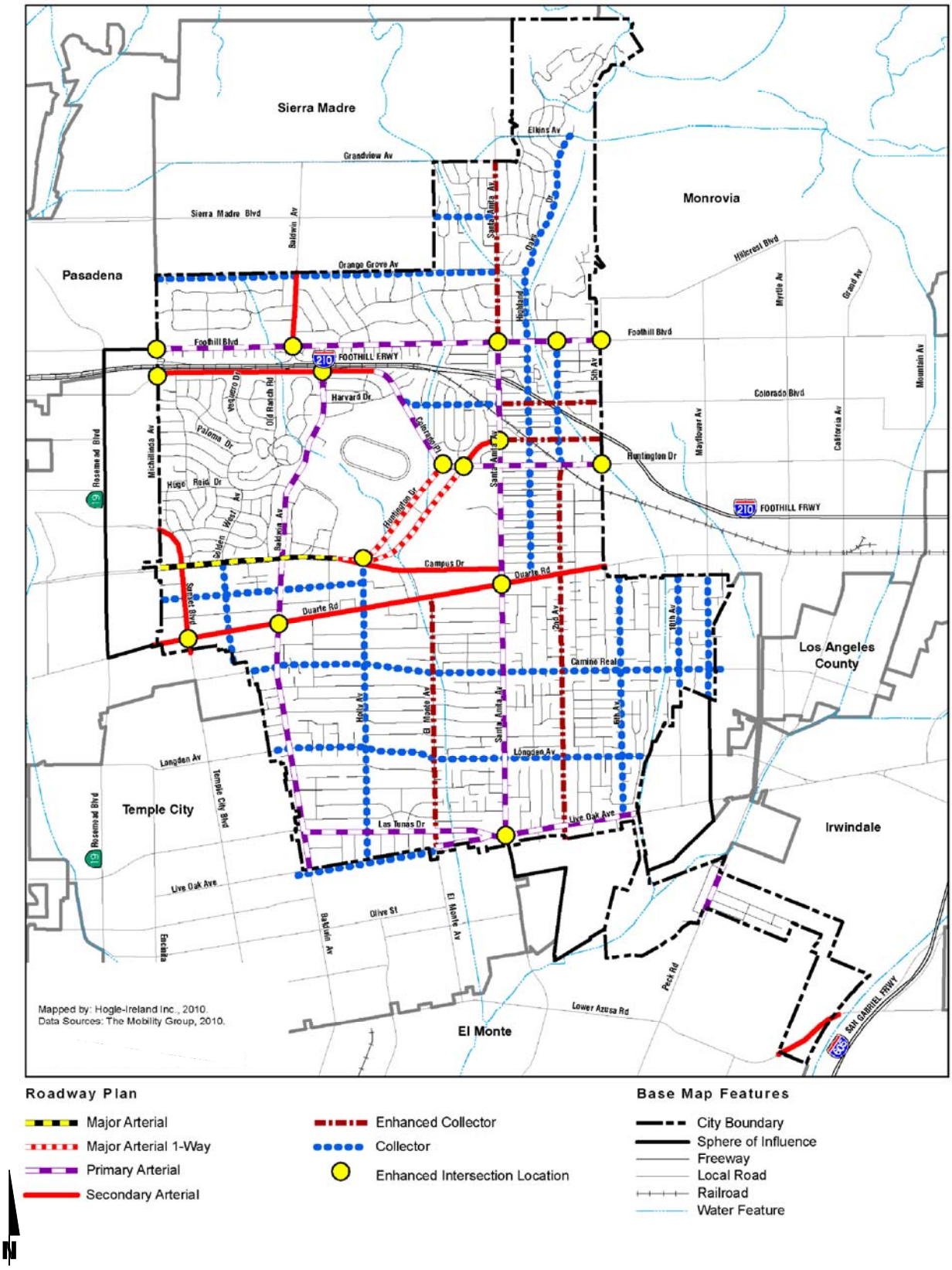


EXHIBIT 3-7: CITY OF ARCADIA GENERAL PLAN ROADWAY CROSS-SECTIONS

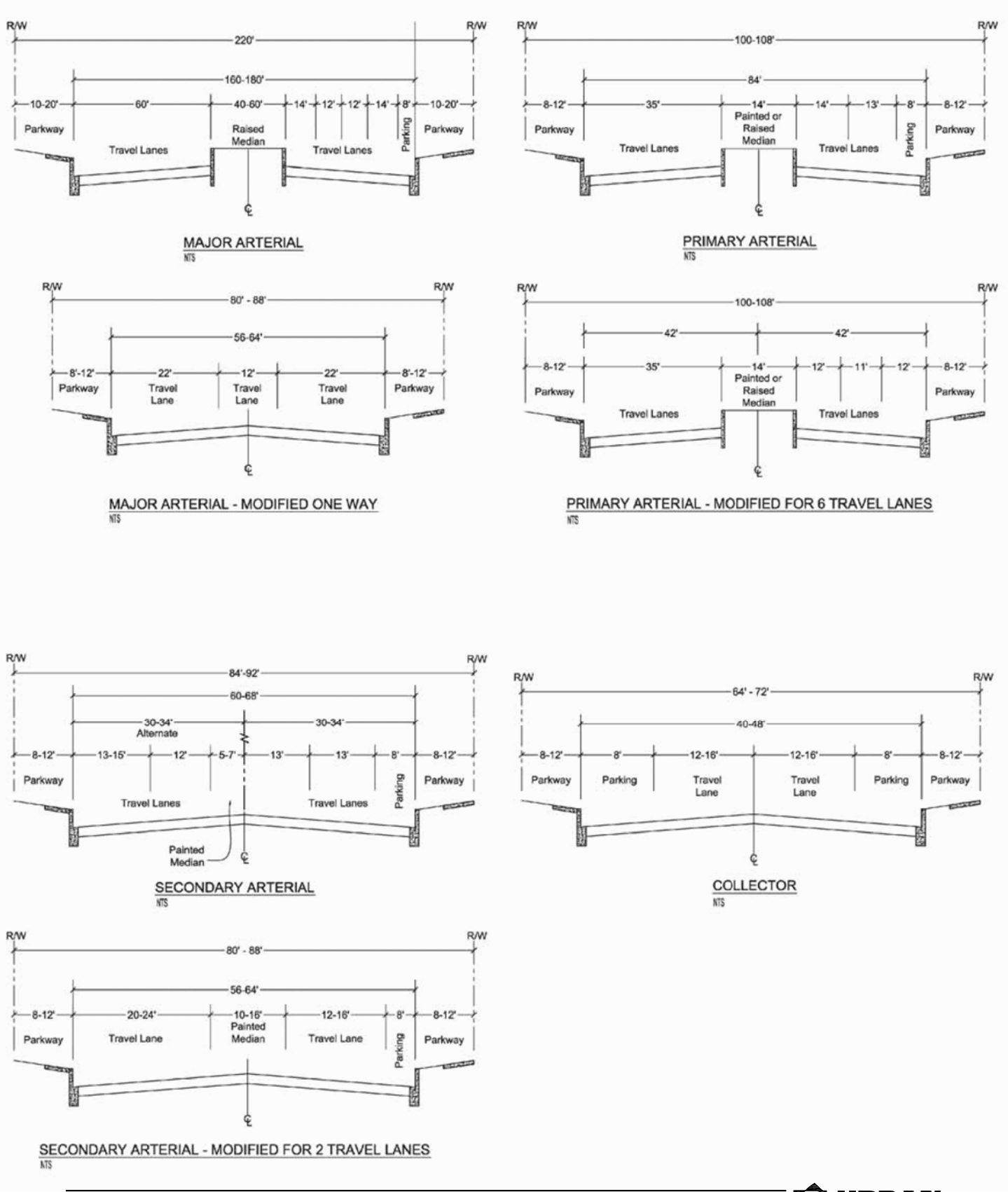
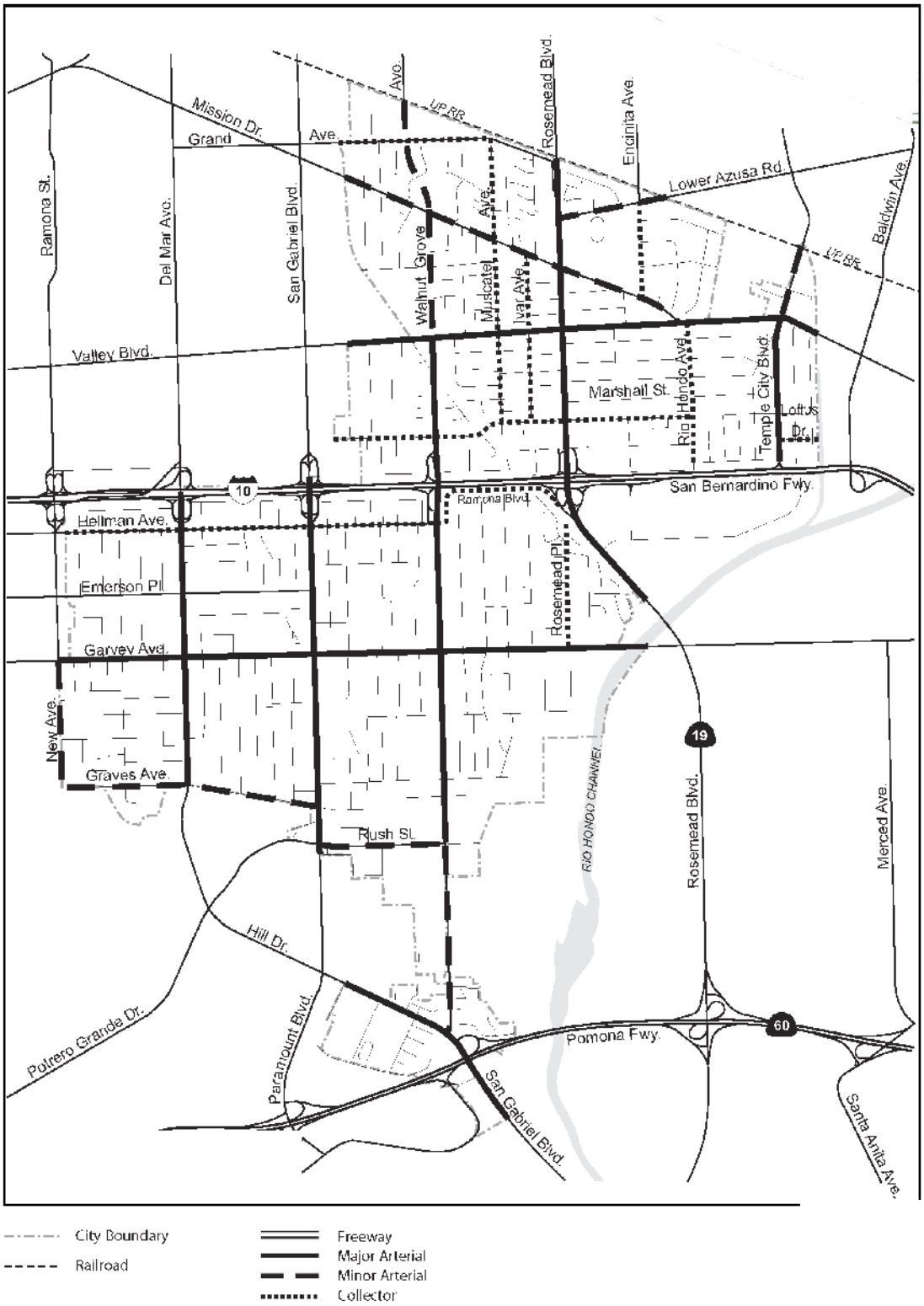


EXHIBIT 3-8: CITY OF ROSEMEAD GENERAL PLAN CIRCULATION ELEMENT



3.7 TRUCK ROUTES

The City of El Monte designated truck route map is shown on Exhibit 3-9. Lower Azusa Road, Baldwin Avenue, Santa Anita Avenue, Valley Boulevard, Ramona Boulevard, and Peck Road are designated City of El Monte truck routes. The City of Arcadia designated truck route map is shown on Exhibit 3-10. Baldwin Avenue and La Tunas Drive are identified as City of Arcadia truck routes. The designated truck route maps have been utilized to route truck traffic from both the proposed Project and future cumulative development projects throughout the study area. There are no applicable truck routes for the City of Rosemead and the City of Temple City.

3.8 PEDESTRIAN AND BICYCLE FACILITIES

The City of El Monte General Plan Circulation Element Bicycle Plans are shown on Exhibit 3-11 and the City of Arcadia General Plan Bikeway Plan is shown on Exhibit 3-12. As shown on Exhibit 3-11, the existing Rio Hondo bike path is to the east of the site, and there are Class II (striped, on-street) and Class III (unstriped, on-street) bike lanes throughout the study area. Arden Drive, and portions of Ramona Boulevard and Valley Boulevard have Class II bike lanes, while Lower Azusa Road is a Class III bike boulevard. Las Tunas Drive is also a Class III bike route on the City of Arcadia General Plan Bikeway Plan (see Exhibit 3-12). The existing pedestrian facilities within the study area are shown on Exhibit 3-13. Field observations conducted in October 2017 indicate nominal pedestrian and bicycle activity within the study area.

3.9 TRANSIT SERVICE

The study area is currently served by the Metro with bus services along Las Tunas Drive (via Route 78 and Route 378), Lower Azusa Road (via Route 268), Valley Boulevard (via Route 267 and Route 376), Ramona Boulevard (via Route 490), Rosemead Boulevard (via Route 170, Route 266, and Route 489), Temple City Boulevard (via Route 267), Baldwin Avenue (via Route 268), Santa Anita Avenue (via Route 70, Route 267, Route 376, Route 378, and Route 487), and Peck Road (via Route 270). The transit service for the study area is illustrated on Exhibit 3-14. The San Bernardino Metrolink Line is also to the south of the Project running near Valley Boulevard and the I-10 Freeway. All existing bus stop locations are also shown on Exhibit 3-14.

3.10 EXISTING TRAFFIC COUNTS

Manual weekday AM and PM peak hour turning movement counts were conducted in October 2017, while surrounding area schools were in session. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. The weekday AM and PM peak hour count data is representative of typical peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity that would prevent or limit roadway access and detour routes. These raw turning volumes have been flow conserved between intersections with limited access, no access and where there are currently no uses generating traffic.

EXHIBIT 3-9: CITY OF EL MONTE GENERAL PLAN CIRCULATION ELEMENT TRUCK ROUTES

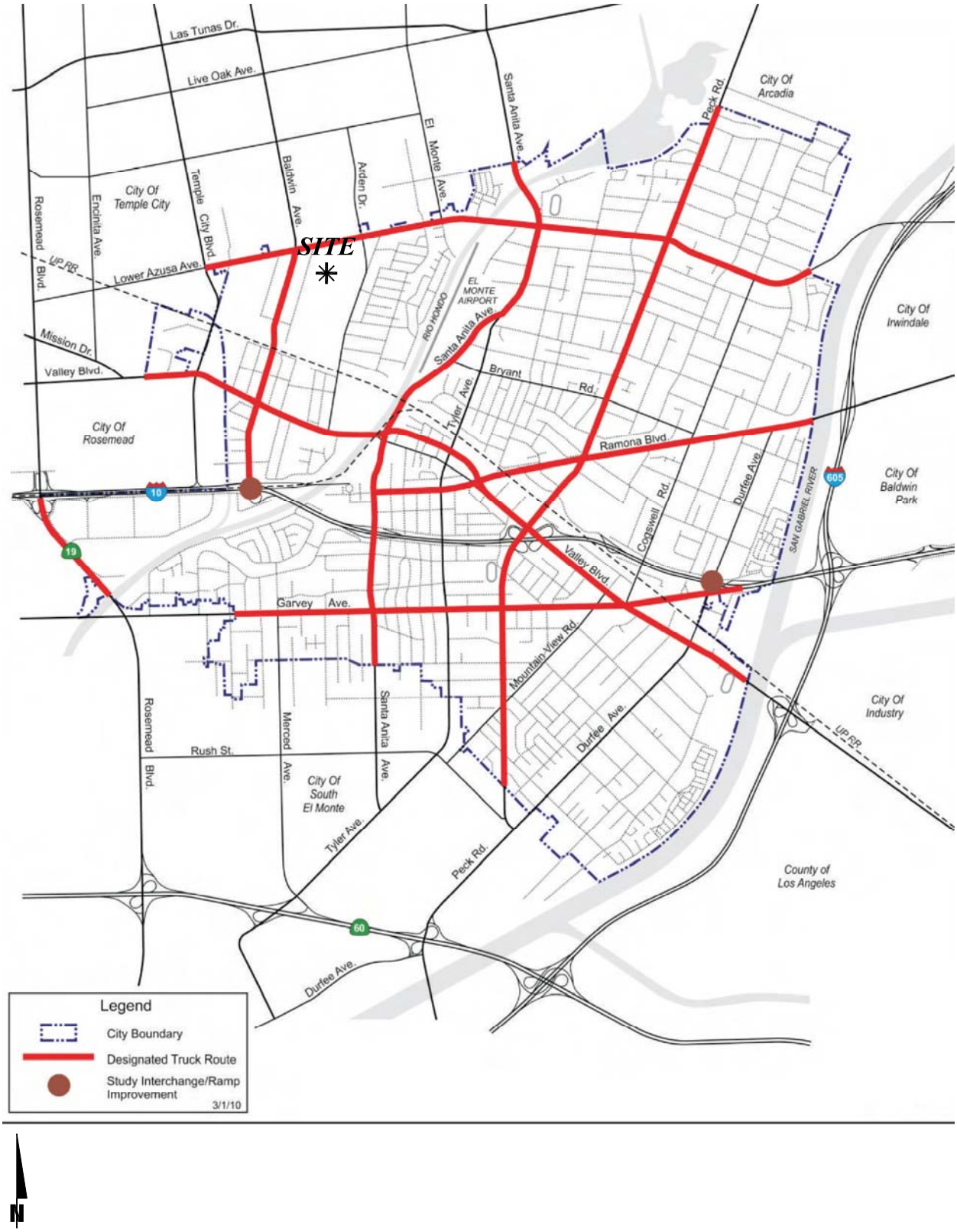


EXHIBIT 3-10: CITY OF ARCADIA TRUCK ROUTES

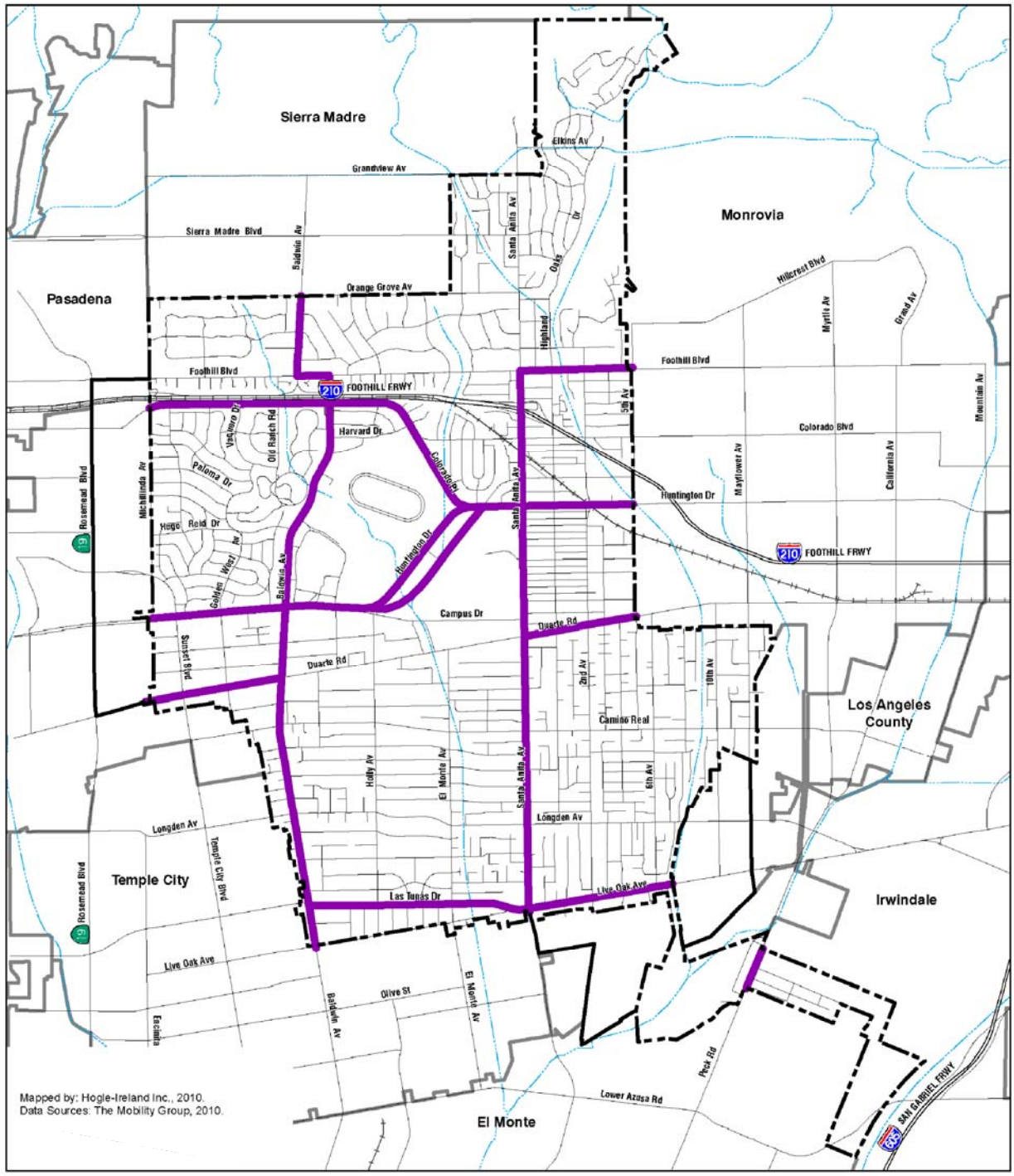


EXHIBIT 3-11: CITY OF EL MONTE GENERAL PLAN CIRCULATION ELEMENT BICYCLE PLANS

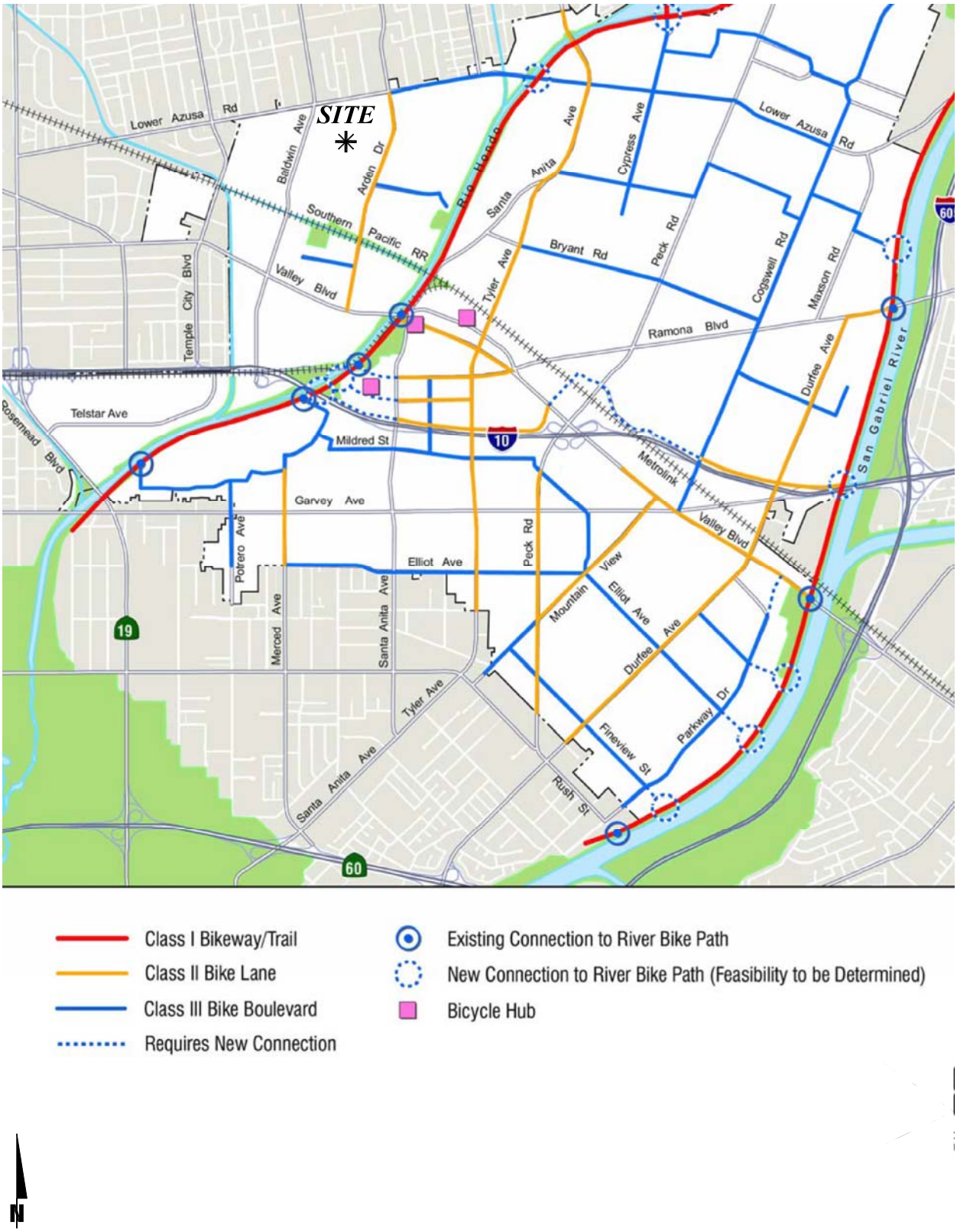


EXHIBIT 3-12: CITY OF ARCADIA GENERAL PLAN BIKEWAY PLAN

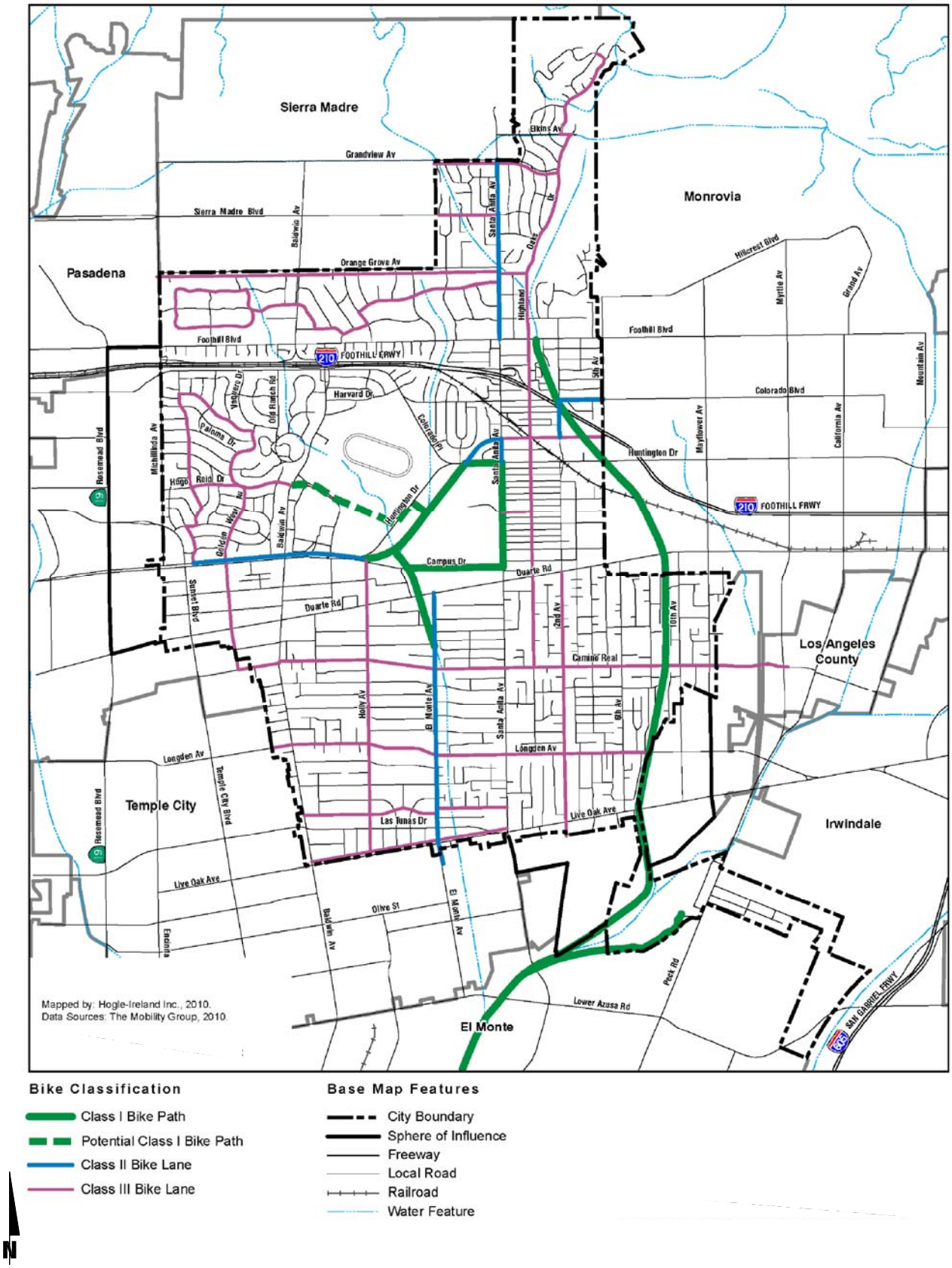
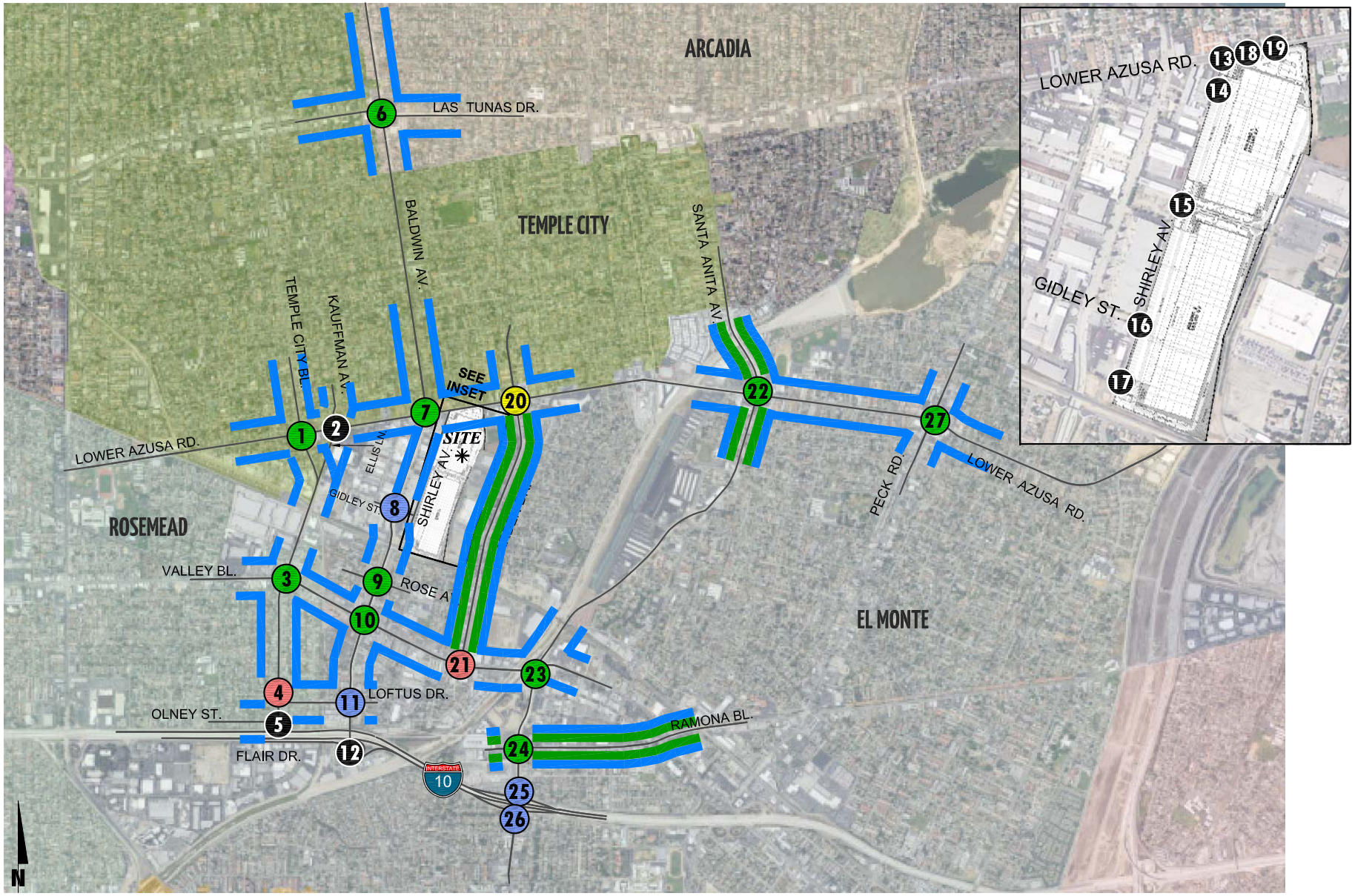
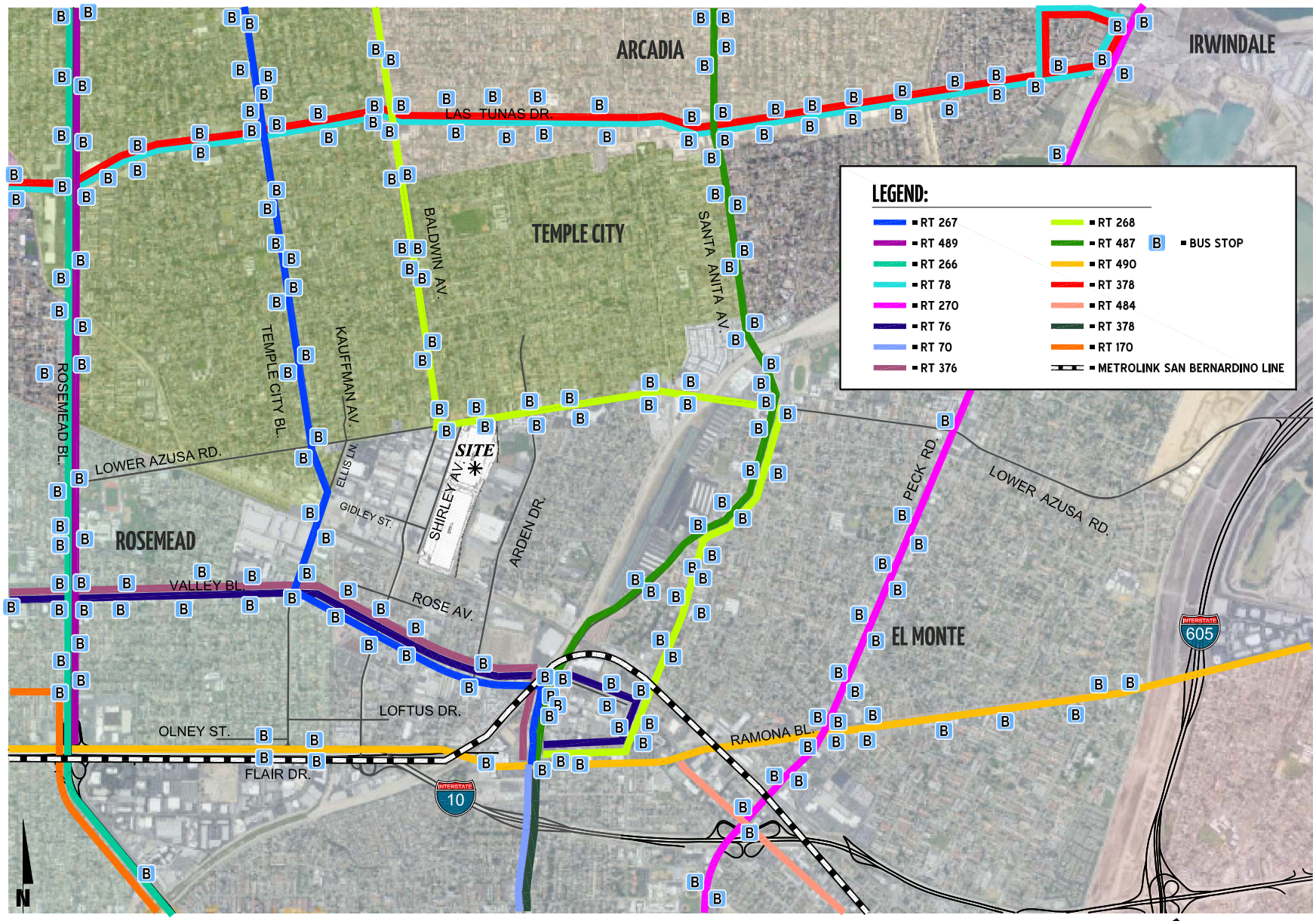


EXHIBIT 3-13: EXISTING PEDESTRIAN FACILITIES



URBAN CROSSROADS

EXHIBIT 3-14: EXISTING TRANSIT ROUTES



Traffic being generated by the existing facility on the Project site was found to be nominal. As such, no credit was taken for the existing uses and Project traffic was added to the Existing baseline in an effort to conduct a conservative analysis. The traffic generated by the existing site were not manually removed from the baseline. As such, the baseline traffic includes the existing traffic currently being generated by the site. The traffic counts collected in October 2017 include the vehicle classifications as shown below:

- Passenger Cars
- 2-Axle Trucks
- 3-Axle Trucks
- 4 or More Axle Trucks

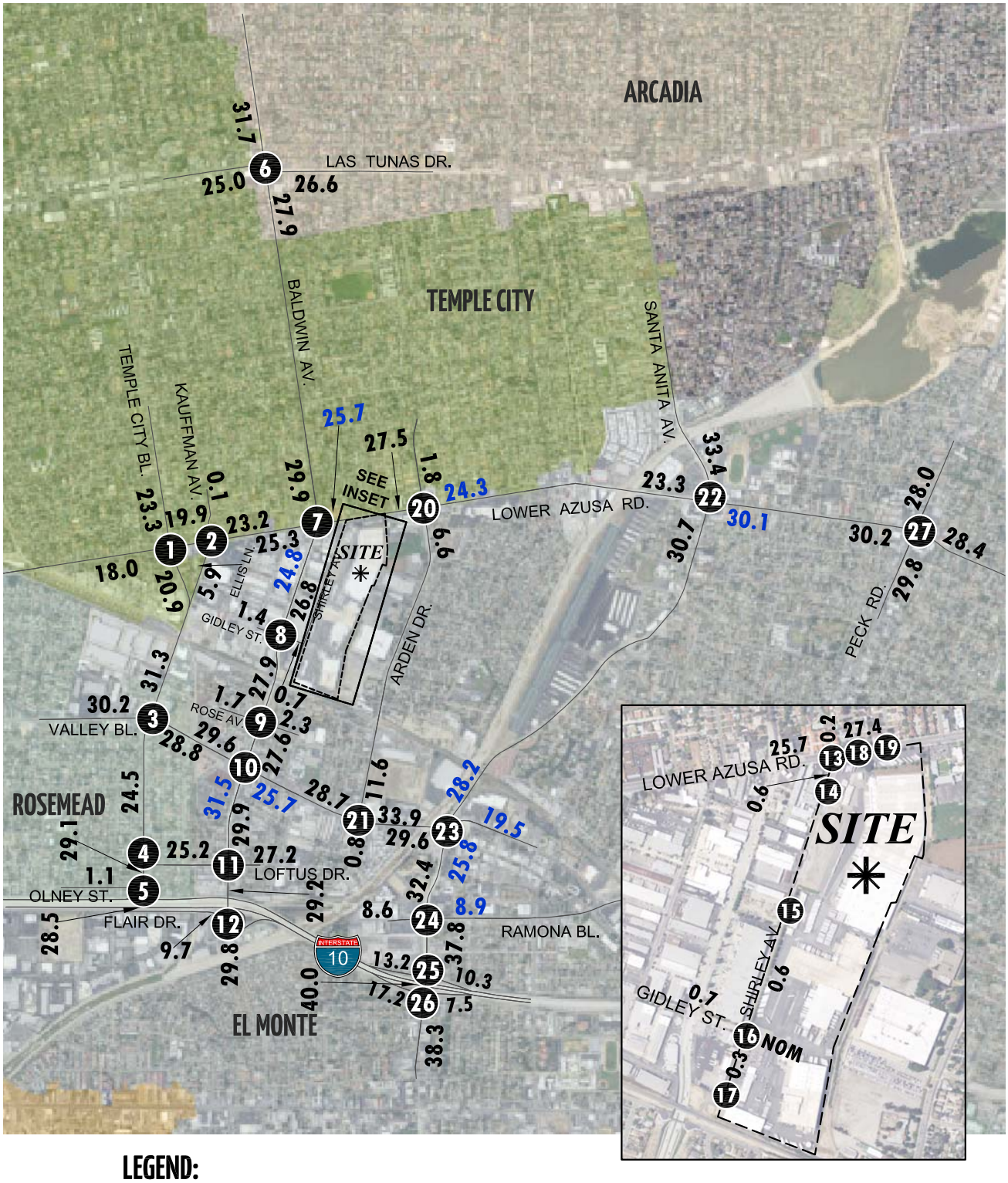
To represent the impact large trucks, buses and recreational vehicles have on traffic flow; all trucks were converted into PCEs. By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow-down is also much longer than for passenger cars, and varies depending on the type of vehicle and number of axles. For the purpose of this analysis, a PCE factor of 1.5 has been applied to 2-axle trucks, 2.0 for 3-axle trucks and 3.0 for 4+-axle trucks to estimate each turning movement. It should be noted that LA County and the Southern California Association of Governments (SCAG) do not have readily available PCE factor recommendations. As such, the PCE factors used are based on recommendations from San Bernardino County Transportation Authority (SBCTA) which is consistent with standard engineering practice throughout the southern California region. Further use of the SBCTA PCE factors was reviewed by the City of El Monte staff during the traffic study scoping process.

Existing weekday average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3-15. Existing ADT volumes are based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 13.889 = Leg Volume

For those roadway segments which have 24-hour tube count data available at locations proximate to the study area, a comparison between the PM peak hour and daily traffic volumes indicated that the peak-to-daily relationship of approximately 7.20 percent would sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. As such, the above equation utilizing a factor of 13.889 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.20 percent (i.e., 1/0.072 = 13.889). Existing weekday AM and PM peak hour intersection volumes are shown on Exhibit 3-16.

EXHIBIT 3-15: EXISTING (2017) AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

- 10.0 = ACTUAL (COUNT-BASED) VEHICLES PER DAY (1000'S)
- 10.0 = ESTIMATED VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

EXHIBIT 3-16: EXISTING (2017) TRAFFIC VOLUMES (IN PCE)

1 Temple City Bl. & Lower Azusa Rd.
77(59) 631(567) 151(176)
120(101) 673(427) 179(119)
81(100) 386(587) 83(35)
83(88) 662(677) 10(23)

2 Kauffman Av./ Ellis Ln. & Lower Azusa Rd.
7(5)
7(4) 953(600) 177(84)
492(731) 62(48)
56(37) 181(254)

3 Temple City Bl. & Valley Bl.
301(196) 518(669) 226(234)
239(187) 928(599) 82(98)
163(253) 593(896) 42(73)
203(156) 791(713) 53(59)

4 Temple City Bl. & Loftus Dr.
411(580) 217(216)
90(95) 336(441)
931(872) 274(190)

5 Temple City Bl. & Olney St.
72(61) 713(973)
28(15)
1235(1065)

6 Baldwin Av. & Las Tunas Dr.
88(146) 738(887) 110(190)
266(165) 1073(591) 94(101)
114(125) 418(778) 89(70)
75(93) 920(769) 73(89)

7 Baldwin Av. & Lower Azusa Rd.
203(155) 776(642) 123(196)
172(119) 855(516) 210(101)
146(230) 415(783) 106(76)
95(64) 596(808) 169(241)

8 Baldwin Av. & Gidley St.
7(4) 1068(867) 6(2)
15(13) 2(0) 12(27)
5(12) 1(2) 25(60)
69(20) 936(1029) 9(8)

9 Baldwin Av. & Rose Av.
47(29) 980(858) 54(44)
102(46) 23(11) 26(4)
26(28) 29(24) 38(21)
10(9) 897(996) 51(39)

10 Baldwin Av. & Valley Bl.
119(126) 776(655) 135(158)
133(135) 942(675) 184(169)
136(116) 513(896) 200(167)
158(152) 653(795) 181(191)

11 Baldwin Av. & Loftus Dr.
261(155) 856(642) 3(196)
28(119) 71(516) 246(101)
73(230) 27(783) 427(76)
31(64) 788(808) 93(241)

12 Baldwin Av. & Flair Dr./ I-10 EB Ramps
727(167) 861(746)
36(160) 71(350)
38(23) 857(1028)

13 Shirley Av. & Lower Azusa Rd.
1(3) 0(0) 1(0)
2(2) 1268(725) 19(6)
2(6) 702(1224) 19(15)
2(6) 0(0) 9(18)

14 Shirley Av. & Dwy. 1
Future Intersection

15 Shirley Av. & Dwy. 2
Future Intersection

16 Shirley Av. & Gidley St.
15(24) 2(2) 1(0)
0(1) 2(0) 0(0)
3(12) 0(0) 6(5)
28(11) 6(5) 0(0)

17 Shirley Av. & Dwy. 3
Future Intersection

18 Dwy. 4 & Lower Azusa Rd.
Future Intersection

19 Dwy. 5 & Lower Azusa Rd.
Future Intersection

20 Arden Dr. & Lower Azusa Rd.
108(22) 23(24) 25(28)
44(30) 891(899) 9(42)
54(11) 999(1003) 55(39)
25(3) 29(11) 39(44)

21 Arden Dr. & Valley Bl.
187(113) 3(3) 606(351)
387(255) 1176(799) 6(17)
82(115) 691(1011) 8(15)
5(15) 1(0) 4(11)

22 Santa Anita Av. & Lower Azusa Rd.
84(97) 882(877) 241(331)
275(250) 743(540) 187(161)
106(67) 423(731) 79(85)
129(157) 748(784) 94(160)

23 Santa Anita Av. & Valley Bl.
409(155) 860(584) 43(45)
21(39) 958(613) 51(84)
185(271) 546(714) 10(12)
409(367) 552(899) 36(56)

24 Santa Anita Av. & Ramona Bl.
66(88) 1218(862) 78(64)
82(62) 78(58) 207(144)
45(100) 54(127) 82(165)
89(82) 861(1158) 258(232)

25 Santa Anita Av. & I-10 WB Ramps
408(371) 1009(807)
359(256) 207(142) 455(346)
250(438) 921(1287)

26 Santa Anita Av. & I-10 EB Ramps
1143(940) 321(213)
375(570) 118(167) 343(501)
796(1154) 313(161)

27 Peck Rd. & Lower Azusa Rd.
217(183) 1015(673) 91(161)
90(71) 851(586) 197(175)
185(167) 470(878) 177(134)
235(228) 793(765) 74(173)

LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

3.11 EXISTING CONDITIONS INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1 which indicates that existing study area intersections are currently operating at an acceptable LOS during the peak hours, with the exception of the following:

- Baldwin Av. & Loftus Dr. (#11) – LOS F AM and PM peak hours
- Baldwin Av. & Flair Dr. (#12) – LOS F AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – LOS E PM peak hour only
- Santa Anita Av. & Valley Bl. (#23) – LOS E AM peak hour only
- Peck Rd. & Lower Azusa Rd. (#27) – LOS E AM peak hour only

Consistent with Table 3-1, a summary of the peak hour intersection LOS for Existing conditions are shown on Exhibit 3-17. The intersection operations analysis worksheets are included in Appendix 3.2 of this TIA.

3.12 EXISTING CONDITIONS ROADWAY SEGMENT CAPACITY ANALYSIS

Table 3-2 provides a summary of the Existing (2017) conditions roadway segment capacity analysis based on the City of El Monte Roadway Segment Capacity Thresholds in the General Plan Update EIR. As shown on Table 3-2, the study area roadway segments are currently operating at an acceptable LOS based on the City's peak hour planning level roadway capacity thresholds.

3.13 EXISTING CONDITIONS TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. For Existing traffic conditions, a traffic signal appears to currently be warranted at the following unsignalized study area intersection (see Appendix 3.3):

- Baldwin Avenue & Flair Drive (#12)

Table 3-1

Intersection Analysis for Existing (2017) Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												ICU or Delay[2] (v/c or secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Temple City Bl. & Lower Azusa Rd.	TS	1	2	0	1	2	0	1	2	0	1	2	0	0.703	0.698	C	B
2	Ellis Ln. & Lower Azusa Rd.	CSS	1	0	1	0	0	1	0	2	0	1	2	0	32.0	23.1	D	C
3	Temple City Bl. & Valley Bl.	TS	1	2	0	1	2	0	1	2	1>	1	2	1>	0.897	0.833	D	D
4	Temple City Bl. & Loftus Dr.	TS	0	2	0	1	2	0	0	0	0	2	0	1>	0.717	0.705	C	C
5	Temple City Bl. & Olney St.	CSS	0	1	0	0	1	1	0	0	1	0	0	0	14.5	18.6	B	C
6	Baldwin Av. & Las Tunas Dr.	TS	1	2	1	1	2	1	1	2	0	1	2	1	0.863	0.787	D	C
7	Baldwin Av. & Lower Azusa Rd.	TS	1	2	d	1	2	d	1	2	0	1	2	0	0.814	0.817	D	D
8	Baldwin Av. & Gidley St.	TS	1	2	0	1	2	0	0	1	1	0	1	0	0.513	0.488	A	A
9	Baldwin Av. & Rose Av.	TS	1	2	0	1	2	0	0	1	0	0	1	0	0.538	0.507	A	A
10	Baldwin Av. & Valley Bl.	TS	1	2	1	1	2	0	1	2	d	1	2	d	0.858	0.833	D	D
11	Baldwin Av. & Loftus Dr.	TS	1	2	0	1	1	1	0	2	0	0	1	0	**1.137**	**1.351**	**F**	**F**
12	Baldwin Av. & Flair Dr.	CSS	1	1	0	0	1	0	1	0	1	0	0	0	**>100.0**	**>100.0**	**F**	**F**
13	Shirley Av. & Lower Azusa Rd.	CSS	0	1	0	0	1	0	1	2	0	1	2	0	25.5	20.5	D	C
14	Shirley Av. & Driveway 1		Future Intersection															
15	Shirley Av. & Driveway 2		Future Intersection															
16	Shirley Av. & Gidley St.	AWS	0	1	0	0	1	0	1	1	0	0	1	d	7.1	7.0	A	A
17	Shirley Av. & Driveway 3		Future Intersection															
18	Driveway 4 & Lower Azusa Rd.		Future Intersection															
19	Driveway 5 & Lower Azusa Rd.		Future Intersection															
20	Arden Dr. & Lower Azusa Rd.	TS	1	1	d	1	1	d	1	2	0	1	2	0	0.518	0.497	A	A
21	Arden Dr. & Valley Bl.	TS	0	1	0	1	1	1	1	2	0	1	2	1	0.715	0.635	C	B
22	Santa Anita Av. & Lower Azusa Rd.	TS	1	2	1	1	2	d	1	2	0	1	2	0	0.869	**0.908**	D	**E**
23	Santa Anita Av. & Valley Bl.	TS	2	3	0	1	3	0	1	2	0	2	2	0	**0.914**	0.742	**E**	C
24	Santa Anita Av. & Ramona Bl.	TS	1	3	0	1	3	0	1	1	0	1	2	0	0.585	0.667	A	B
25	Santa Anita Av. & I-10 WB Ramps	TS	1	2	0	0	3	1	0	0	0	1	2	0	19.0	19.2	B	B
26	Santa Anita Av. & I-10 EB Ramps	TS	0	3	1	1	2	0	1	1	1	0	0	0	17.5	21.7	B	C
27	Peck Rd. & Lower Azusa Rd.	TS	1	2	d	1	2	d	1	2	0	1	2	0	**0.974**	0.878	**E**	D

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d= Defacto Right Turn Lane

[2] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for unsignalized all-way stop controlled intersections. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements haring a single lane) are shown. The Intersection Capacity Utilization (ICU) volume-to-capacity ratio has been reported for all signalized intersections.

[3] CSS = Cross Street Stop; AWS = All-Way Stop; TS = Traffic Signal

Table 3-2

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Roadway Segment Capacity Analysis for Existing (2017) Conditions

#	Roadway	Segment Limits	Eastbound/Northbound					Westbound/Southbound					Acceptable
			# of Lanes	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	# of Lanes	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	LOS
1	Lower Azusa Rd.	Baldwin Av. to Arden Dr.											E
		AM Peak Hour:	2	1,400	1,108	0.79	C	2	1400	1,237	0.88	D	
		PM Peak Hour:	2	1,400	1,220	0.87	D	2	1400	924	0.66	B	
2	Lower Azusa Rd.	Arden Dr. to Santa Anita Av.											E
		AM Peak Hour:	2	1400	1,063	0.76	C	2	1400	956	0.68	B	
		PM Peak Hour:	2	1400	1,075	0.77	C	2	1400	971	0.69	B	
3	Lower Azusa Rd.	Santa Anita Av. to Peck Rd.											E
		AM Peak Hour:	2	1400	823	0.59	A	2	1400	1,303	0.93	E	
		PM Peak Hour:	2	1400	1,222	0.87	D	2	1400	997	0.71	C	
4	Valley Bl.	Baldwin Av. to Arden Dr.											E
		AM Peak Hour:	2	1600	829	0.52	A	2	1600	1,368	0.86	D	
		PM Peak Hour:	2	1600	1,245	0.78	C	2	1600	979	0.61	B	
5	Valley Bl.	Santa Anita Av. to Tyler Av.											E
		AM Peak Hour:	2	1600	625	0.39	A	2	1600	1,030	0.64	B	
		PM Peak Hour:	2	1600	815	0.51	A	2	1600	736	0.46	A	
6	Baldwin Av.	Lower Azusa Rd. to Valley Bl.											D
		AM Peak Hour:	2	1600	922	0.58	A	2	1600	1,092	0.68	B	
		PM Peak Hour:	2	1600	1,113	0.70	B	2	1600	939	0.59	A	
7	Baldwin Av.	Valley Bl. to I-10 Freeway											E
		AM Peak Hour:	2	1600	912	0.57	A	2	1600	1,529	0.96	E	
		PM Peak Hour:	2	1600	1,138	0.71	C	2	1600	991	0.62	B	
8	Santa Anita Av.	Valley Bl. to Ramona Bl.											D
		AM Peak Hour:	3	2400	997	0.42	A	3	2400	1,362	0.57	A	
		PM Peak Hour:	3	2400	1,322	0.55	A	3	2400	1,014	0.42	A	

Table 3-2

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Roadway Segment Capacity Analysis for Existing (2017) Conditions

#	Roadway	Segment Limits	Eastbound/Northbound					Westbound/Southbound					Acceptable
			# of Lanes	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	# of Lanes	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	LOS
9	Santa Anita Av.	Ramona Bl. to I-10 Freeway											E
		AM Peak Hour:	3	2400	1,208	0.50	A	3	2400	1,507	0.63	B	
		PM Peak Hour:	3	2400	1,472	0.61	B	3	2400	1,171	0.49	A	

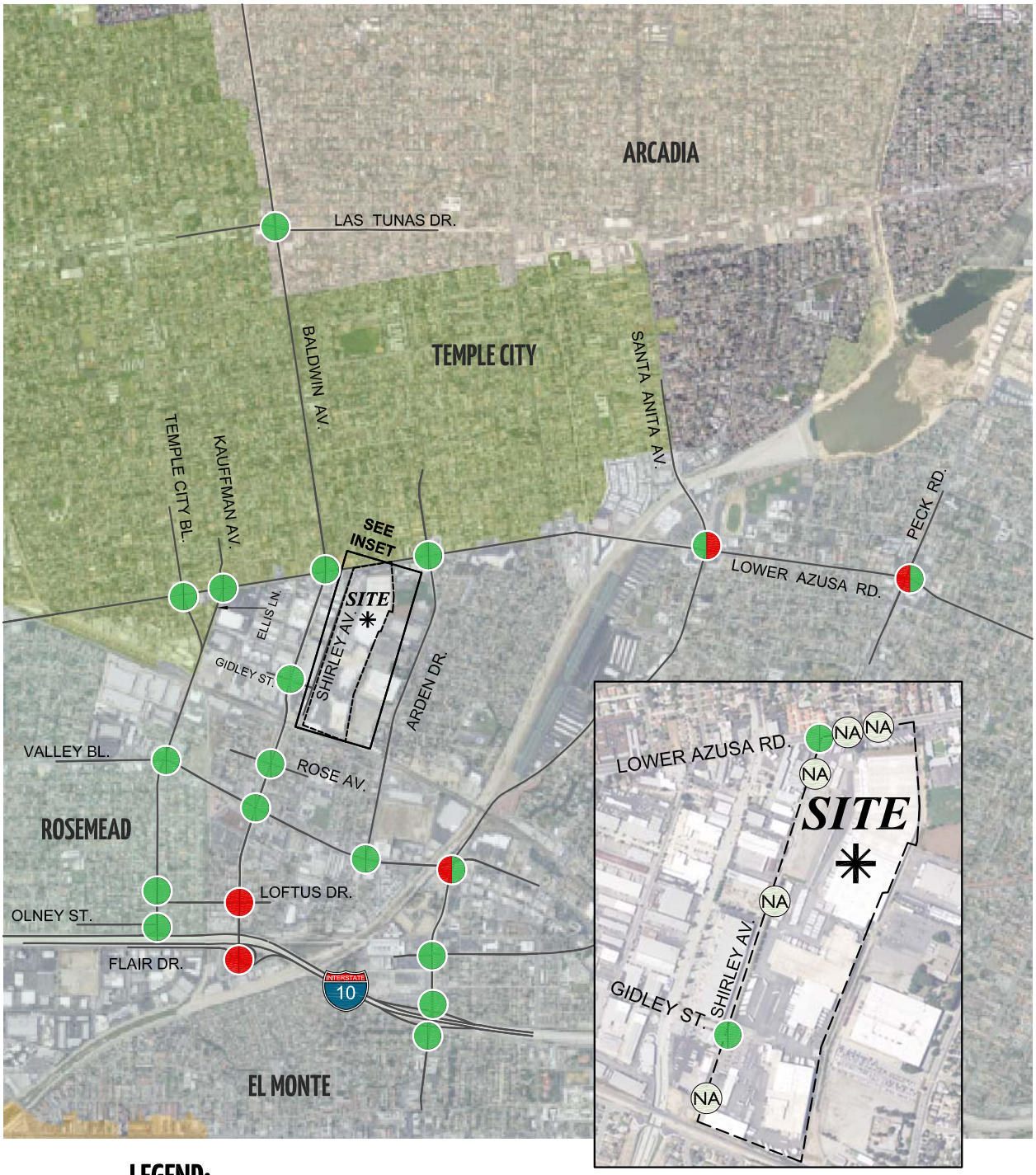
BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] These maximum roadway capacities have been extracted from the following source: City of El Monte General Plan EIR (Table 5.13-2). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

EXHIBIT 3-17: EXISTING (2017) SUMMARY OF LOS



LEGEND:

- = AM PEAK HOUR ACCEPTABLE LOS
- = AM PEAK HOUR DEFICIENT LOS
- = PM PEAK HOUR ACCEPTABLE LOS
- = PM PEAK HOUR DEFICIENT LOS
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

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4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. It is our understanding that the Project is proposed to consist of 1,235,340 square feet of high cube transload and short-term storage warehouse use within two buildings (572,240 square feet for Building 1 and 663,100 square feet for Building 2). The proposed land use is consistent with the City's General Plan. For the purposes of this analysis, the Project is anticipated to be developed in a single phase with an Opening Year of 2020.

The Project is proposed to access Shirley Avenue via three driveways and two driveways on Lower Azusa Road. Regional access to the Project site will be provided by the I-10 Freeway via Temple City Boulevard, Baldwin Avenue, and Santa Anita Avenue and I-605 Freeway via Lower Azusa Road.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

4.1.1 PROPOSED PROJECT

The proposed Project is located on the southeast corner of Shirley Avenue and Lower Azusa Road where there is an existing warehouse building (existing Vons Warehouse). The site will be redeveloped with the proposed modified Project. The existing facility is not very active, as such, no credit has been taken for the existing facility for the purposes of this TIA. The traffic generated by the existing site were not manually removed from the baseline. As such, the baseline traffic includes the existing traffic generated by the site. This results in a more conservative analysis as the trip generation is overstated, as opposed to understated.

In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the ITE Trip Generation Manual (10th Edition, 2017) for high-cube transload and short-term storage warehouse (ITE Land Use Code 154). (4) The vehicle mix was obtained from the High Cube Warehouse Vehicle Trip Generation Analysis, October 2016, prepared by ITE. (8) This identifies the percentage of passenger cars versus the percentage of total trucks. The truck mix (percentage of 2-axle, 3-axle, and 4+-axle trucks) is based on the South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type for high-cube warehouse uses.

PCE factors have been applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). Consistent with standard traffic engineering practice in Southern California, PCE factors have been utilized due to the expected heavy truck component for the proposed Project land use. PCE factors allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, for the purposes of capacity and level of

service analyses. PCE factors are applied to large truck types such as large two-axles, three-axles, 4+-axles. A PCE factor of 1.5 has been applied to large 2-axle trucks, a factor of 2.0 for 3-axle trucks and a factor of 3.0 for 4+-axle trucks.

The Project's actual and PCE trip generation are shown on Tables 4-1 and 4-2, respectively. The Project is estimated to generate a net total of 1,729 actual vehicle trip-ends per day on a typical weekday with approximately 98 AM peak hour trips and 123 PM peak hour trips. In comparison, the Project is estimated to generate a net total of 2,561 PCE trip-ends per day on a typical weekday with approximately 146 PCE AM peak hour trips and 181 PCE PM peak hour trips. The Project's PCE trip generation has been utilized for the purposes of this TIA.

4.1.2 PROJECT ALTERNATIVE

Trip generation was also calculated for the Project site based on the other approved land use designations identified in the 2011 General Plan Update EIR. ITE trip generation rates for these other uses are summarized on Table 4-3. Table 4-4 provides a summary of the trip generation for the modified Project in terms of PCE trips for the other four potential industrial uses: General Light Industrial (ITE Land Use Code 110), Industrial Park (ITE Land Use Code 130), Manufacturing (ITE Land Use Code 140), and Warehousing (ITE Land Use Code 150). Since the General Plan Update EIR did not specifically disclose the number of trips to be generated by the modified Project's land use, trip generation for the alternative industrial uses was estimated based on the modified Project's proposed total square footage.

4.1.3 TRIP GENERATION COMPARISON

Table 4-4 compares the modified Project trip generation with the General Plan Update EIR trip generation, which shows that across all land uses and peak hours, the modified Project (as proposed as a high-cube transload short-term warehouse) is anticipated to generate significantly fewer trips than the General Plan Buildout land uses considered in the General Plan Update EIR. The trip generation has been calculated based on the allowable square footage per the General Plan Update EIR (55.86 acres x 43.560 square feet per acre x 0.5 floor to area ratio = 1,216,631 square feet). As shown on Table 4-4, the modified Project's trip generation, and consequently traffic impacts will likely be significantly less than the trip generation and traffic impacts disclosed in the General Plan Update EIR. Below is a summary of the change in trip generation for each of the land uses evaluated:

- General Light Industrial (1,216,631 square feet) – would generate 5,337 more PCE trip-ends per day, 973 more PCE AM peak hour trips, and 826 more PM peak hour trips as compared to the modified Project evaluated for the purposes of this TIA.
- Industrial Park (1,216,631 square feet) – would generate 2,364 more PCE trip-ends per day, 442 more PCE AM peak hour trips, and 406 more PM peak hour trips as compared to the modified Project evaluated for the purposes of this TIA.
- Manufacturing (1,216,631 square feet) – would generate 3,697 more PCE trip-ends per day, 846 more PCE AM peak hour trips, and 889 more PM peak hour trips as compared to the modified Project evaluated for the purposes of this TIA.

Table 4-1

Project Trip Generation Summary (in Actual Vehicles)

Land Use	Units[2]	ITE LU Code	AM Peak Hour Inbound	AM Peak Hour Outbound	AM Peak Hour Total	PM Peak Hour Inbound	PM Peak Hour Outbound	PM Peak Hour Total	Daily
Project Trip Generation Rates[1]									
High Cube Transload and Short-Term Storage Warehouse[3]	TSF	154	0.06	0.02	0.08	0.03	0.07	0.10	1.40
68.8% Passenger Cars			0.042	0.013	0.055	0.019	0.050	0.069	0.963
5.2% 2-Axle Trucks			0.003	0.001	0.004	0.001	0.004	0.005	0.073
6.5% 3-Axle Trucks			0.004	0.001	0.005	0.002	0.005	0.007	0.091
19.5% 4-Axle+ Trucks			0.012	0.004	0.016	0.005	0.014	0.020	0.273

Land Use	Quantity	Units[2]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Project Trip Generation Summary									
Building 1	572.240	TSF							
Passenger Cars:			24	7	31	11	28	39	551
Truck Trips:									
2-axle:			2	1	2	1	2	3	42
3-axle:			2	1	3	1	3	4	52
4+-axle:			7	2	9	3	8	11	156
- Net Truck Trips (Actual)			*11*	*4*	*14*	*5*	*13*	*18*	*250*
Building 1 Subtotal:			*35*	*11*	*45*	*16*	*41*	*57*	*801*
Building 2	663.100	TSF							
Passenger Cars:			28	8	36	13	33	46	639
Truck Trips:									
2-axle:			2	1	3	1	2	3	48
3-axle:			3	1	3	1	3	4	60
4+-axle:			8	2	10	4	9	13	181
- Net Truck Trips (Actual)			*13*	*4*	*16*	*6*	*14*	*20*	*289*
Building 2 Subtotal:			*41*	*12*	*53*	*19*	*47*	*66*	*928*
Proposed Project Total[4]			**76**	**23**	**98**	**35**	**88**	**123**	**1,729**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

[2] TSF = thousand square feet

[3] Vehicle Mix Source: High Cube Warehouse Vehicle Trip Generation Analysis, October 2016, ITE.

Truck Mix: High Cube Warehouse Vehicle Trip Generation Analysis (ITE, October 2016) recommended truck mix, by axle type.

[4] Proposed Project Total (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Vehicles).

Table 4-2

Project Trip Generation Summary (in PCE)

Land Use	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Project Trip Generation Rates[1]									
High Cube Transload and Short-Term Storage Warehouse[3]	TSF	154	0.06	0.02	0.08	0.03	0.07	0.10	1.40
68.8% Passenger Cars			0.042	0.013	0.055	0.019	0.050	0.069	0.963
5.2% 2-Axle Trucks (PCE = 1.5)			0.005	0.001	0.006	0.002	0.006	0.008	0.109
6.5% 3-Axle Trucks (PCE = 2.0)			0.008	0.002	0.010	0.004	0.009	0.013	0.182
19.5% 4-Axle+ Trucks (PCE = 3.0)			0.036	0.011	0.047	0.016	0.042	0.059	0.819

Land Use	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Project Trip Generation Summary									
Building 1	572.240	TSF							
Passenger Cars:			24	7	31	11	28	39	551
Truck Trips:									
2-axle:			3	1	4	1	3	4	62
3-axle:			5	1	6	2	5	7	104
4+-axle:			21	6	27	9	24	33	469
- Net Truck Trips (PCE)			*29*	*8*	*37*	*12*	*32*	*44*	*635*
Building 1 Subtotal:			*53*	*15*	*68*	*23*	*60*	*83*	*1,186*
Building 2	663.100	TSF							
Passenger Cars:			28	8	36	13	33	46	639
Truck Trips:									
2-axle:			3	1	4	1	4	5	72
3-axle:			5	2	7	2	6	9	121
4+-axle:			24	7	31	11	28	39	543
- Net Truck Trips (PCE)			*32*	*10*	*42*	*14*	*38*	*53*	*736*
Building 2 Subtotal:			*60*	*18*	*78*	*27*	*71*	*98*	*1,375*
Project Total[4]			**113**	**33**	**146**	**50**	**131**	**181**	**2,561**

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Tenth Edition (2017).

[2] TSF = thousand square feet

[3] Vehicle Mix Source: High Cube Warehouse Vehicle Trip Generation Analysis, October 2016, ITE. PCE rates are per SBCTA.
Truck Mix: High Cube Warehouse Vehicle Trip Generation Analysis (ITE, October 2016) recommended truck mix, by axle type.

[4] Project Total (PCE) = Passenger Cars + Net Truck Trips (PCE).

Table 4-3

Trip Generation Rates for Other Industrial Uses

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
ITE 10th Edition Trip Generation Rates (PCE)									
General Light Industrial	TSF	110	0.810	0.110	0.920	0.120	0.850	0.970	6.970
Passenger Cars (80.0%)			0.648	0.088	0.736	0.096	0.680	0.776	5.576
2-Axle Trucks (3.34%) (PCE = 1.5)			0.041	0.006	0.046	0.006	0.043	0.049	0.349
3-Axle Trucks (4.14%) (PCE = 2.0)			0.067	0.009	0.076	0.010	0.070	0.080	0.577
4-Axle+ Trucks (12.52%) (PCE = 3.0)			0.304	0.041	0.346	0.045	0.319	0.364	2.618
Industrial Park	TSF	130	0.690	0.150	0.840	0.180	0.680	0.860	6.960
Passenger Cars (87.0%)			0.600	0.131	0.731	0.157	0.592	0.748	6.055
2-Axle Trucks (2.17%) (PCE = 1.5)			0.022	0.005	0.027	0.006	0.022	0.028	0.227
3-Axle Trucks (2.69%) (PCE = 2.0)			0.037	0.008	0.045	0.010	0.037	0.046	0.374
4-Axle+ Trucks (8.14%) (PCE = 3.0)			0.168	0.037	0.205	0.044	0.166	0.210	1.700
Warehouse	TSF	150	0.240	0.060	0.300	0.080	0.240	0.320	3.560
Passenger Cars (80.0%)			0.192	0.048	0.240	0.064	0.192	0.256	2.848
2-Axle Trucks (3.34%) (PCE = 1.5)			0.012	0.003	0.015	0.004	0.012	0.016	0.178
3-Axle Trucks (4.14%) (PCE = 2.0)			0.020	0.005	0.025	0.007	0.020	0.026	0.295
4-Axle+ Trucks (12.52%) (PCE = 3.0)			0.090	0.023	0.113	0.030	0.090	0.120	1.337
Manufacturing	TSF	140	0.570	0.160	0.730	0.260	0.470	0.730	3.820
Passenger Cars (80.0%)			0.456	0.128	0.584	0.208	0.376	0.584	3.056
2-Axle Trucks (3.34%) (PCE = 1.5)			0.029	0.008	0.037	0.013	0.024	0.037	0.191
3-Axle Trucks (4.14%) (PCE = 2.0)			0.047	0.013	0.060	0.022	0.039	0.060	0.316
4-Axle+ Trucks (12.52%) (PCE = 3.0)			0.214	0.060	0.274	0.098	0.177	0.274	1.435

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 8th Edition (2008).
High Cube Warehouse Vehicle Trip Generation Analysis (ITE, October 2016), or Trip Generation Handbook (3rd Edition, October 2017, ITE) utilized for vehicle mix. No other vehicle mix was provided in the General Plan. As such, the current methodology has been applied.

[2] TSF = thousand square feet

Table 4-4

Trip Generation Comparison (PCE)

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
General Light Industrial	364.989	TSF							
Passenger Cars:			237	33	270	36	249	285	2,036
Truck Trips:									
2-axle:			*15*	*3*	18	*3*	*16*	19	*128*
3-axle:			*25*	*4*	29	*4*	*26*	30	*211*
4+-axle:			*112*	*16*	128	*17*	*117*	134	*956*
- Net Truck Trips			*152*	*23*	*175*	*24*	*159*	*183*	*1,295*
Total Trips (General Light Industrial)[2]			***389***	***56***	***445***	***60***	***408***	***468***	***3,331***
Industrial Park	486.652	TSF							
Passenger Cars:			293	64	357	77	288	365	2,947
Truck Trips:									
2-axle:			*11*	*3*	14	*3*	*11*	14	*111*
3-axle:			*19*	*4*	23	*5*	*18*	23	*183*
4+-axle:			*82*	*18*	100	*22*	*81*	103	*828*
- Net Truck Trips (PCE)			*112*	*25*	*137*	*30*	*110*	*140*	*1,122*
Total Trips (Industrial Park)[2]			***405***	***89***	***494***	***107***	***398***	***505***	***4,069***
Warehousing	243.326	TSF							
Passenger Cars:			47	12	59	16	47	63	693
Truck Trips:									
2-axle:			*3*	*1*	4	*1*	*3*	4	*44*
3-axle:			*5*	*2*	7	*2*	*5*	7	*72*
4+-axle:			*22*	*6*	28	*8*	*22*	30	*326*
- Net Truck Trips			*30*	*9*	*39*	*11*	*30*	*41*	*442*
Total Trips (Warehousing)[2]			***77***	***21***	***98***	***27***	***77***	***104***	***1,135***
Manufacturing	121.663	TSF							
Passenger Cars:			56	16	72	26	46	72	372
Truck Trips:									
2-axle:			*4*	*1*	5	*2*	*3*	5	*24*
3-axle:			*6*	*2*	8	*3*	*5*	8	*39*
4+-axle:			*27*	*8*	35	*12*	*22*	34	*175*
- Net Truck Trips			*37*	*11*	*48*	*17*	*30*	*47*	*238*
Total Trips (Manufacturing)[2]			***93***	***27***	***120***	***43***	***76***	***119***	***610***
Total Trips (General Plan Land Use Mix)[2]			***964***	***193***	***1,157***	***237***	***959***	***1,196***	***9,145***
Total Trips (Project)[2]			***113***	***33***	***146***	***50***	***131***	***181***	***2,561***
Variance (Net Increase)[3]			***851***	***160***	***1,011***	***187***	***828***	***1,015***	***6,584***

[1] TSF = thousand square feet

[2] TOTAL NET TRIPS = Passenger Cars + Net Truck Trips.

[3] VARIANCE = Total Trips (General Plan Land Use Mix) - Total Trips (Project)

- Warehousing (1,216,631 square feet) – would generate 212 more PCE trip-ends per day, 128 more PCE AM peak hour trips, and 125 more PM peak hour trips as compared to the modified Project evaluated for the purposes of this TIA.

4.2 PROJECT TRIP DISTRIBUTION

Trip distributions for the proposed Project's are illustrated on Exhibits 4-1 through 4-4. Exhibit 4-1 and 4-2 illustrate the proposed Project trip distribution patterns for the passenger cars for Building 1 and Building 2, respectively. Similarly, Exhibit 4-3 and Exhibit 4 illustrate the proposed Project trip distribution patterns for trucks for Building 1 and Building 2, respectively. Trip distribution patterns have been made based on the proposed land uses, existing transportation network, truck routes, and anticipated travel patterns. These distributions were reviewed and approved by City staff as part of the scoping process (see Appendix 1.1).

4.3 MODAL SPLIT

Although the use of public transit, walking, and/or bicycling have the potential to reduce Project-related traffic, such reductions have not been taken into consideration in this traffic study in order to provide a conservative analysis of the Project's potential to contribute to circulation system deficiencies.

4.4 PROJECT TRIP ASSIGNMENT

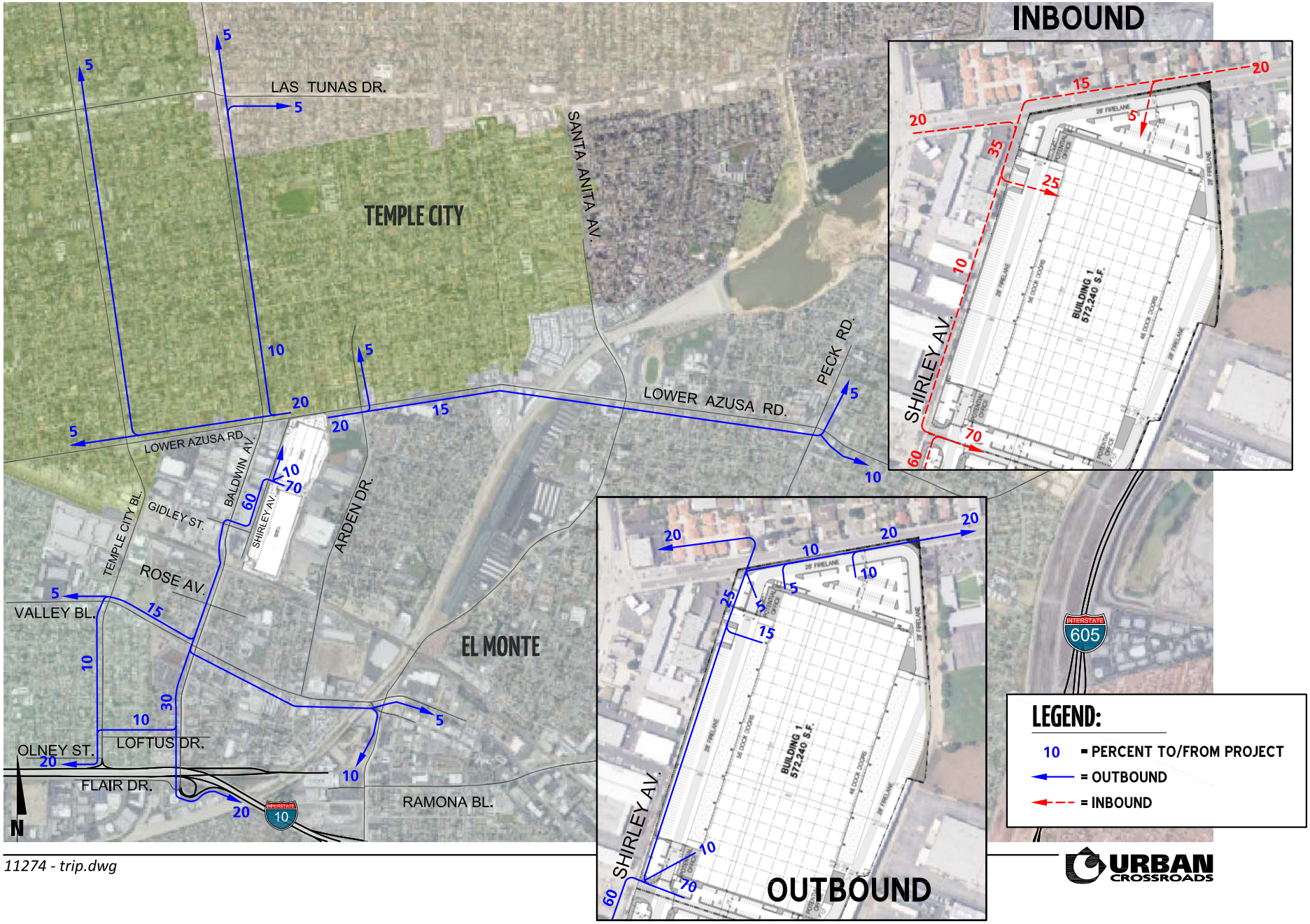
The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project ADT and peak hour intersection turning movement volumes are shown on Exhibits 4-5 and 4-6, respectively.

4.5 BACKGROUND TRAFFIC

4.5.1 OPENING YEAR CUMULATIVE CONDITIONS

The Opening Year Cumulative conditions analysis determines the Project's contribution to near-term cumulative traffic impacts based on a comparison of the "with Project" traffic scenario to the Without Project traffic scenario. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth from Existing (2017) conditions of 1.49% (0.49% per year over three years) is included for Opening Year Cumulative, as well as traffic generated by cumulative projects that could affect the study intersections. Traffic being generated by the existing facility on the Project site was found to be nominal. As such, no credit was taken for the existing uses and Project traffic was added to the Existing baseline in an effort to conduct a conservative analysis. The traffic generated by the existing site were not manually removed from the baseline. As such, the baseline traffic includes the existing traffic currently being generated by the site.

EXHIBIT 4-1: PROJECT TRIP DISTRIBUTION (BUILDING 1-PASSENGER CARS)



11274 - trip.dwg

URBAN CROSSROADS

EXHIBIT 4-2: PROJECT TRIP DISTRIBUTION (BUILDING 2-PASSENGER CARS)

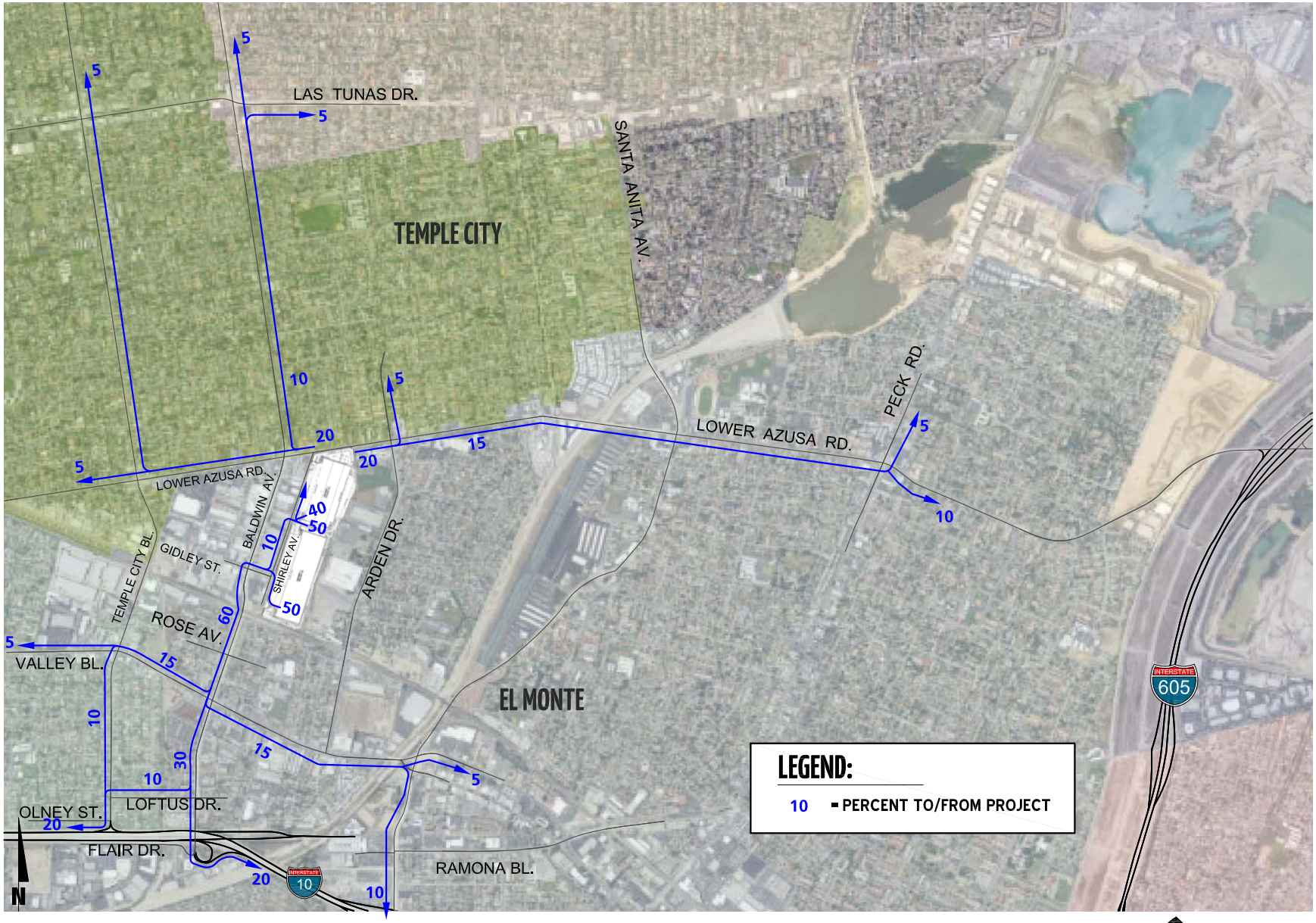
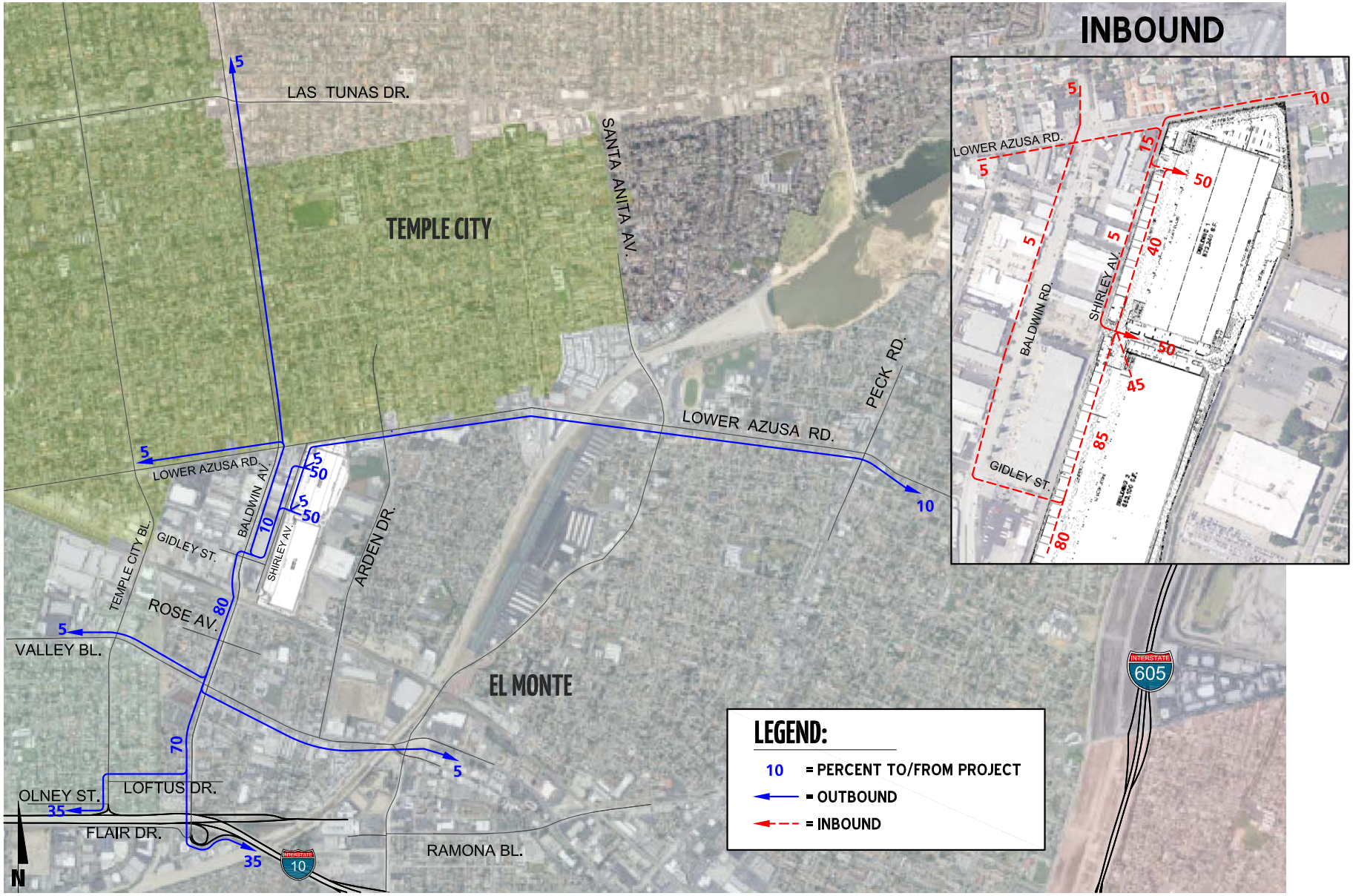


EXHIBIT 4-3: PROJECT TRIP DISTRIBUTION (BUILDING 1-TRUCKS)



URBAN CROSSROADS

EXHIBIT 4-4: PROJECT TRIP DISTRIBUTION (BUILDING 2-TRUCKS)

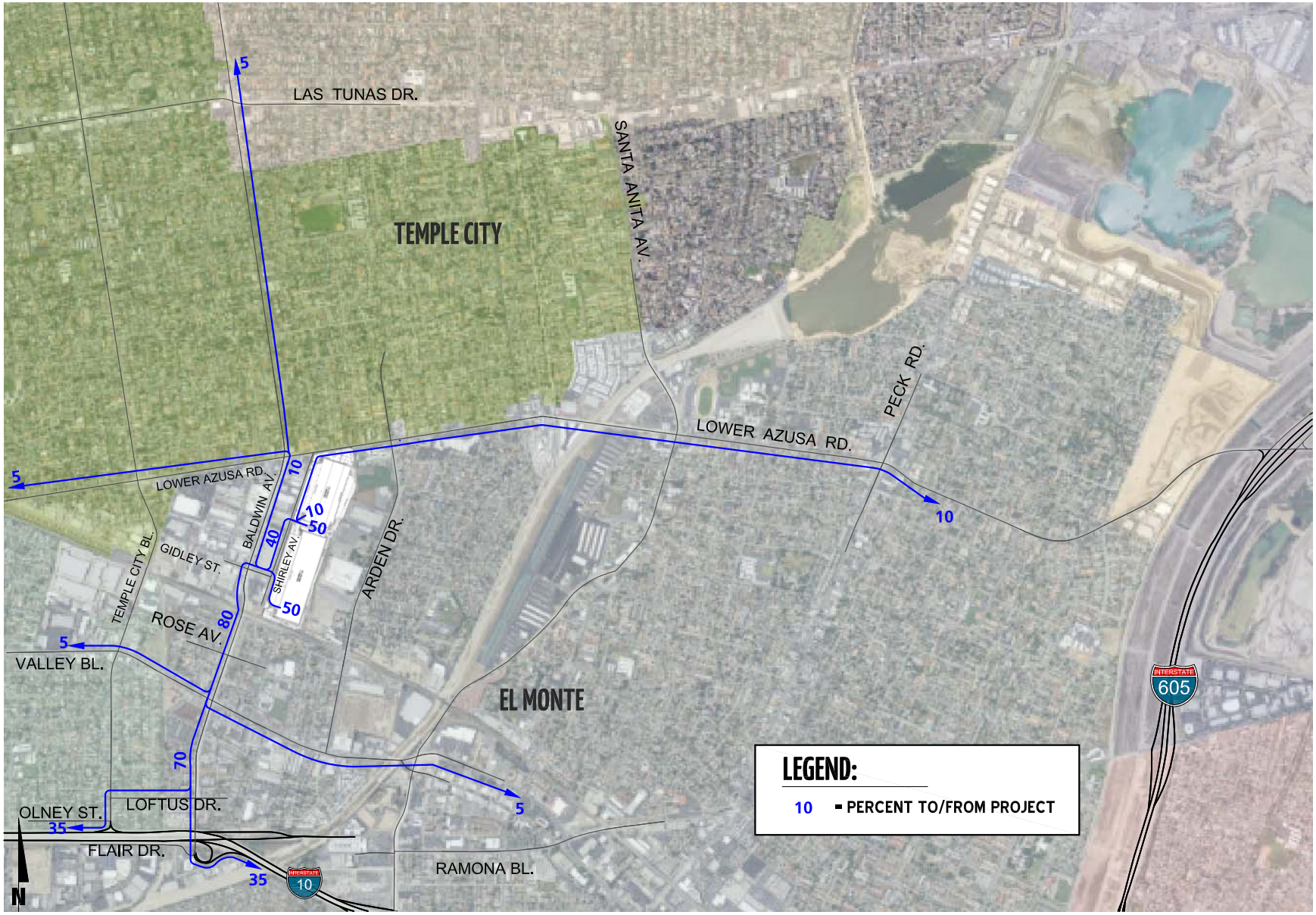


EXHIBIT 4-5: PROJECT AVERAGE DAILY TRAFFIC (ADT)

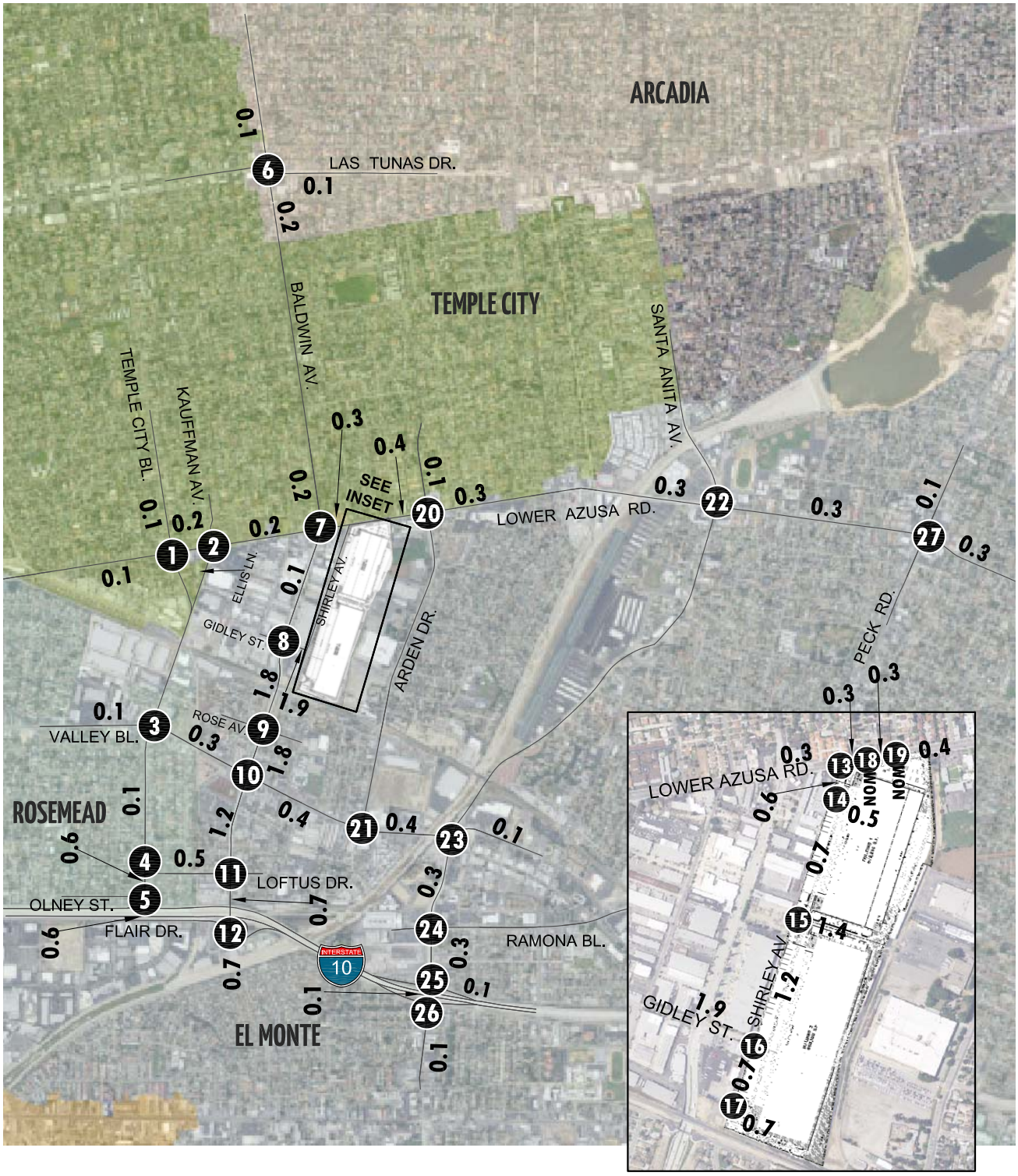
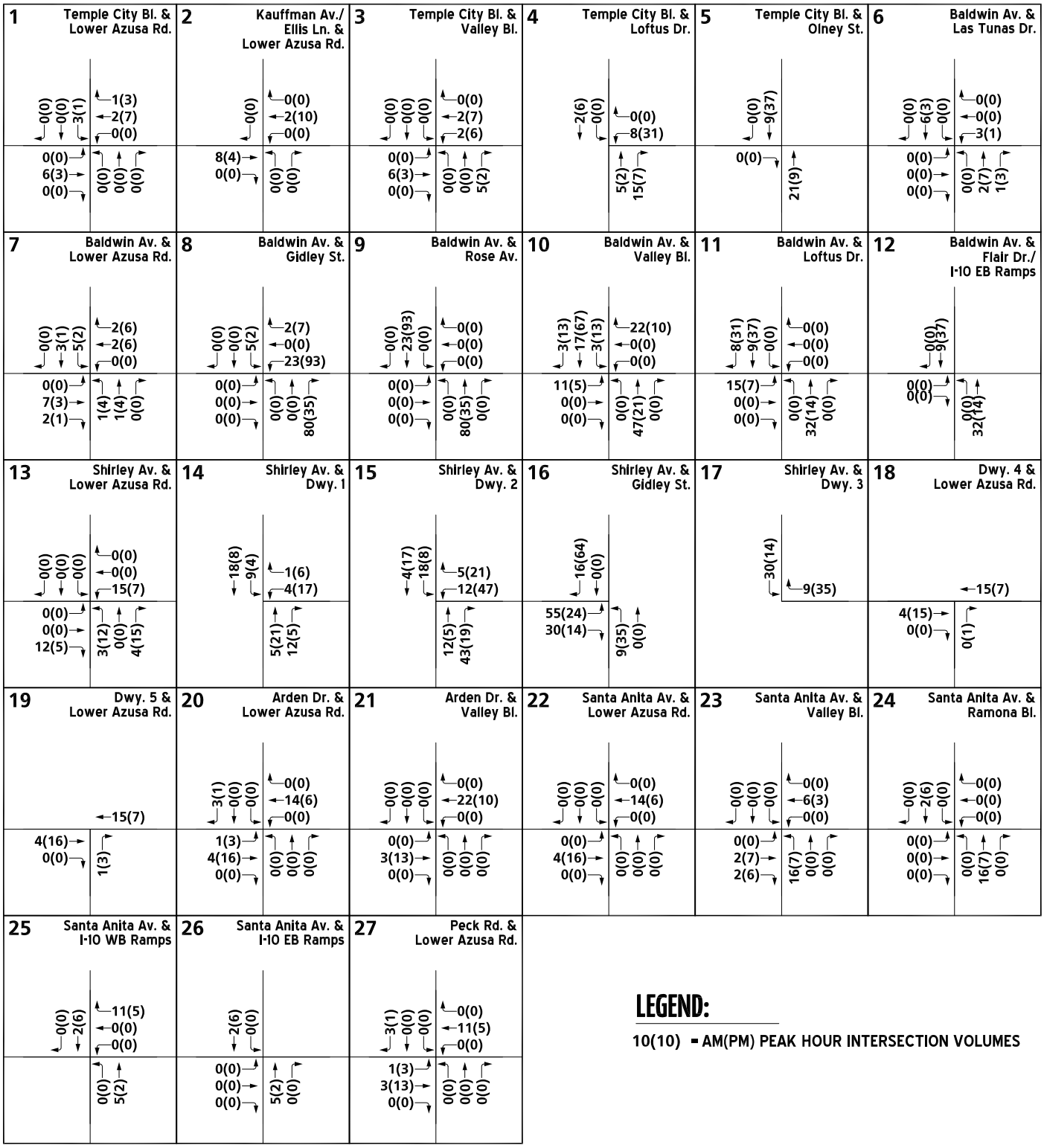


EXHIBIT 4-6: PROJECT TRAFFIC VOLUMES (IN PCE)



The generalized growth factors provided in 2010 LA County CMP indicates a growth factor of 1.131 for 25 years (2010 to 2035) or 0.49% per year for the Regional Statistical Area (RSA) 25 (Pasadena) in which the Project is located. (9)

4.5.2 HORIZON YEAR CUMULATIVE CONDITIONS

Horizon Year Without Project traffic conditions include an ambient traffic growth factor of 9.27% (0.49% per year over 18 years) based on the growth factors provided in LA County CMP for RSA 25. A growth factor of 1.131 was estimated for 25 years (from 2010 to 2035) in LA County CMP, which is equivalent to 0.49% per year growth. Lastly, traffic generated by cumulative projects that could affect the study intersections was added on top of the ambient growth.

The RSA map for the San Gabriel Valley and the General Traffic Volume Growth Factors from Appendix *D – Guidelines for CMP Transportation Impact Analysis* from the 2010 LA County CMP are included in Appendix 4.1 of this report. (9)

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

California Environmental Quality Act (CEQA) guidelines require that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. Exhibit 4-7 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown on Table 4-5. If applicable (i.e. if the cumulative projects are anticipated to contribute trips to study area intersections), the traffic generated by individual cumulative projects was manually added to the Opening Year Cumulative and Horizon Year forecasts to ensure that traffic generated by the listed cumulative development projects in Table 4-5 are reflected as part of the background traffic. Traffic from other cumulative developments farther away from the study area are not anticipated to add significant traffic and are accounted for by the ambient growth rate applied to forecast the background traffic.

EXHIBIT 4-7: CUMULATIVE DEVELOPMENT LOCATION MAP

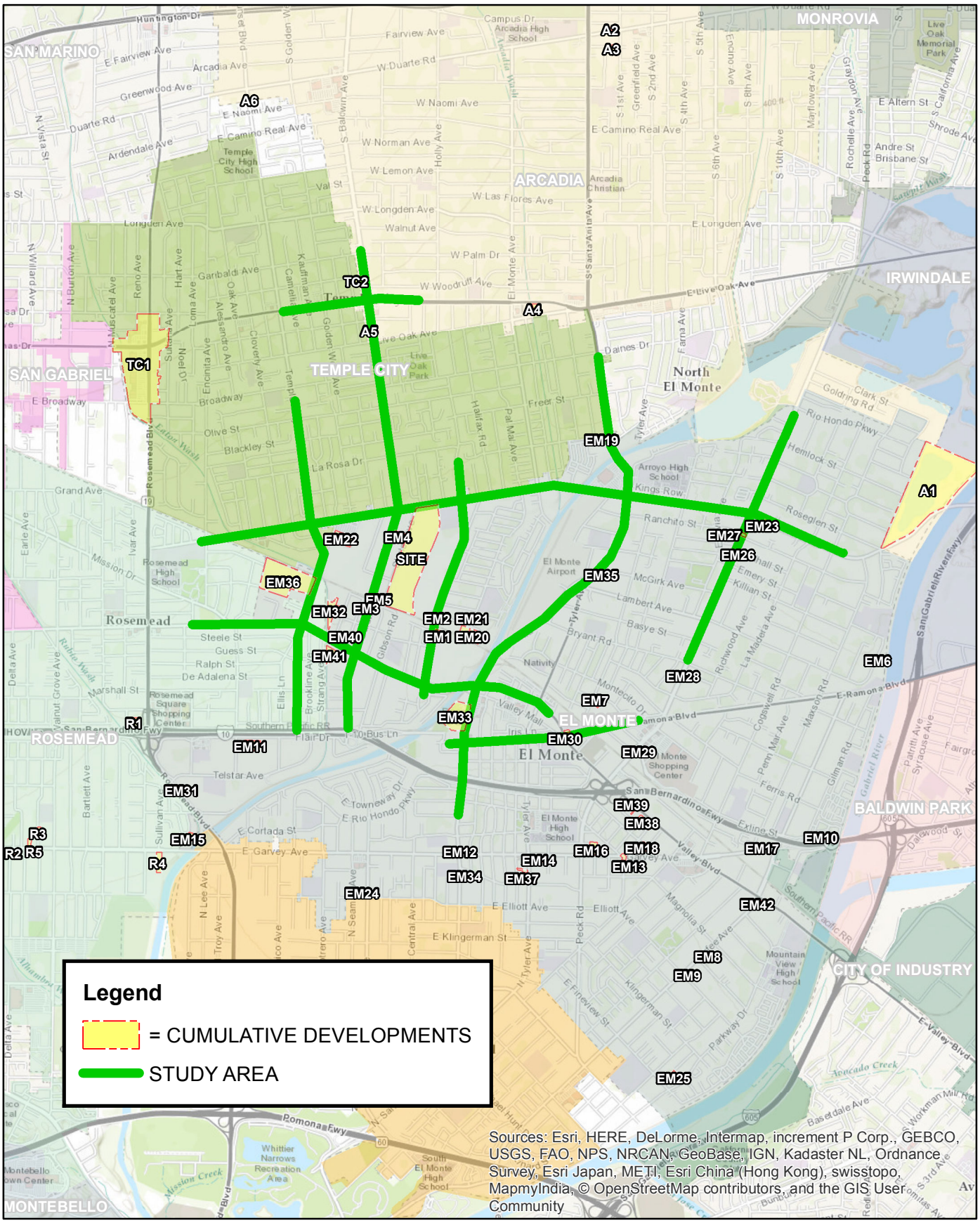


Table 4-5

Cumulative Development Land Use Summary

#	Project/Location	Land Use	Quantity	Units[1]
		City of El Monte		
EM1	4000 Arden Dr.	Walmart	182.429	TSF
EM2	4144 Arden Dr.	Warehouse	61.163	TSF
EM3	4102-4165 Baldwin & 9960 Bessie Av.	Affordable Housing	55	DU
EM4	4456 Baldwin Av.	Warehouse Expansion	10.000	TSF
EM5	4200 Baldwin Av.	Warehouse	22.963	TSF
EM6	4422-4436 Bannister St.	Single Family Detached Residential	22	DU
EM7	3708 Cypress Av.	Single Family Detached Residential	12	DU
EM8	2728 Durfee Av.	Commercial Retail	1.364	TSF
EM9	2616 Durfee Av.	Mixed Use Residential	13	DU
EM10	12440 Exline	Indoor Airsoft Field		TSF
EM11	9400 Flair Dr.	Commercial Retail	690.000	TSF
		Hotel	250	Rooms
		Single Family Detached Residential	600	DU
EM12	10613 Garvey Av.	Starbucks	0.890	TSF
EM13	11605 Garvey Av.	Senior Housing Attached	30	DU
		Commercial Retail	6.000	TSF
EM14	11022-11048 Garvey Av.	Townhomes	70	DU
		Commercial Retail	2.000	TSF
EM15	9133 Garvey Av.	General Office	60.000	TSF
		Warehouse/Distribution	30.000	TSF
EM16	11301-11401 Garvey Av.	Townhomes	114	DU
		Commercial Retail	5.400	TSF
EM17	12243 Garvey Av.	Auto Repair Shop	2.400	TSF
EM18	11619-11707 Garvey Av. & 11726-28 Asher & 3024 La Madera	Senior Housing Attached	28	DU
		Assisted Living	74	DU
		Memory Care	13	DU
		Commercial Retail	5.700	TSF
EM19	10950 Grand Av.	General Office	2.000	TSF
EM20	10620 Hickson St.	Warehouse	65.000	TSF
EM21	10460 Hickson St.	General Office	93.096	TSF
EM22	9700 Lower Azusa Rd.	Starbucks	0.890	TSF
EM23	11646 Lower Azusa Rd.	Single Family Detached Residential	3	DU
EM24	2615 Merced Av.	Manufacturing	3.000	TSF
EM25	2231 Parkway Dr.	Single Family Detached Residential	9	DU
EM26	4610 Peck Rd.	Townhomes	23	DU
EM27	4704-4716 Peck Rd.	Affordable Housing	49	DU
EM28	4014 Peck Rd.	Commercial Retail	3.999	TSF
EM29	3520 Peck Rd.	Wendy's Restaurant		TSF
EM30	11127 Ramona	Townhomes	62	DU
EM31	3268 Rosemead Bl.	General Office	12.250	TSF
EM32	4127-4143 Rowland	Townhomes	71	DU
EM33	3527 Santa Anita Av.	Townhomes	420	DU
		Commercial Retail	25.000	TSF

Table 4-5

Page 2 of 2

Cumulative Development Land Use Summary

#	Project/Location	Land Use	Quantity	Units[1]
EM34	2704, 2710, 2728 Santa Anita Av.	Townhomes	40	DU
EM35	4378 Santa Anita Av.	Gas Station	12	VFP
EM36	4213 Temple City Bl.	Industrial/Commercial	502.020	TSF
EM37	2735 Tyler Av.	Warehouse		TSF
EM38	11640-11707 Valley Bl.	Townhomes	76	DU
		Commercial Retail	30.000	TSF
EM39	10620 Valley Bl.	Norm's Restaurant	6.830	TSF
EM40	9933 Valley Bl.	Commercial Retail	17.222	TSF
EM41	9920 Valley Bl.	Hotel	133	Rooms
EM42	12300 Valley Bl.	Hotel	80	Rooms
City of Irwindale				
I1	Manning Pit	Industrial	545.735	TSF
I2	JH Pit	Business Park	1,550.000	TSF
I3	Panatonni (16203-16233 Arrow Highway)	Industrial	133.800	TSF
I4	Panatonni (242 Live Oak Avenue)	Industrial	85.400	TSF
I5	Ayala Industrial Building	Industrial	80.000	TSF
I6	Irwindale Medical Clinic	Medical Office		TSF
I7	Wendy's Restaurant	Fast-food restaurant w/ drive-through	2.300	TSF
I8	Kaiser Medical Office Building	Medical Office	90.000	TSF
City of Temple City				
TC1	Temple City Crossroads	Residential	1,887	DU
		Commercial	1,082.061	TSF
TC2	Terraces at Temple City	Condominiums	61	DU
		Fast-food restaurant w/o drive-through	7.250	TSF
City of Rosemead				
R1	Hampton Inn & Suites	Hotel	123	DU
R2	Garvey Garden Plaza Mixed Use	Residential	46	DU
		Retail/Office	11.380	TSF
R3	New Garvey 168 Plaza	Residential	28	DU
		Retail/Office	10.300	TSF
R4	Preface Mixed Use	Residential	48	DU
		Retail/Office	6.500	TSF
R5	Garvey Earle Mixed Use	Residential	35	DU
		Retail/Restaurant	7.200	TSF
R7	La Terra Planned Development	Single Family Detached Residential	21	DU
R8	Ross Dress For Less	Commercial		TSF
City of Arcadia				
A1	Arcadia Logistics Center	Warehouse/Distribution	1,688.000	TSF
A2	55 E. Duarte	Commercial Retail	3.309	TSF
A3	56 E. Duarte	Commercial Retail	18.812	TSF
		Condominiums	37	DU
A4	135-139 W. Live Oak Av.	Residential	17	DU
A5	5733 S. Baldwin Av.	Residential	4	DU
A6	1222 Temple City Bl.	Residential	10	DU

[1] TSF = Ten Thousand Square Feet; DU = Dwelling Unit; VFP = Vehicle Fueling Position

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5 E+P TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing plus Project (E+P) conditions and the resulting intersection operations, roadway segment, and traffic signal warrant analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions consist of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways). Improvements include construction of site adjacent roadways and intersections needed for site access.

5.2 E+P TRAFFIC VOLUME FORECASTS

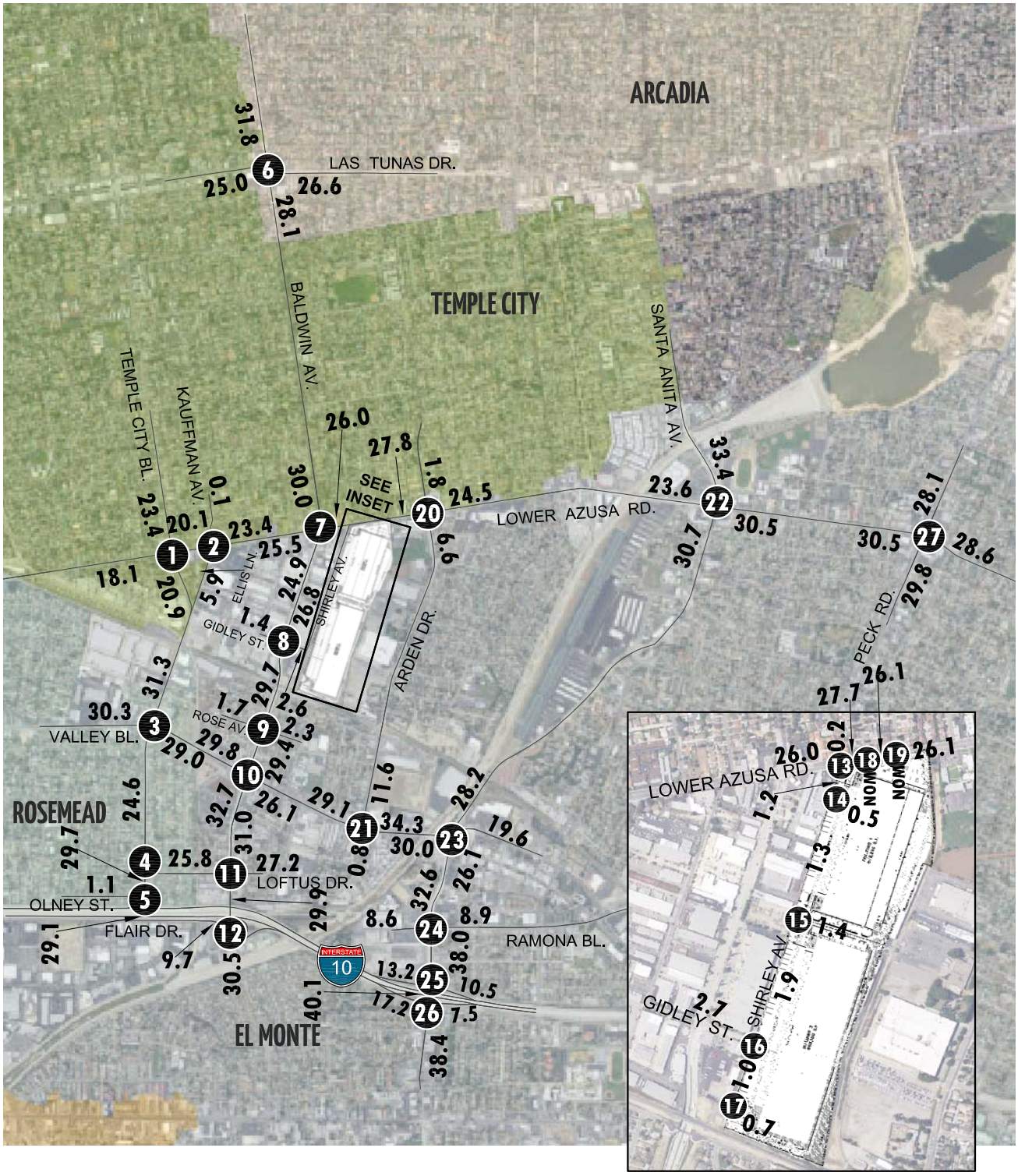
This scenario includes Existing traffic volumes plus Project traffic. Exhibit 5-1 shows the ADT volumes which can be expected for E+P traffic conditions. E+P AM and PM peak hour intersection turning movement volumes are shown on Exhibit 5-2.

5.3 INTERSECTION OPERATIONS ANALYSIS

E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 5-1, which indicate that the addition of Project traffic is not calculated to result in any additional LOS deficiencies, in addition to those previously identified under Existing (2017) traffic conditions. However, the addition of Project traffic is anticipated to result in an increase to the volume-to-capacity (v/c) ratio of 0.01 or more during the peak hours at the following intersections, resulting in a significant cumulative impact for E+P traffic conditions:

- Baldwin Av. & Valley Bl. (#10) – v/c > 0.02 during the PM peak hour
- Baldwin Av. & Loftus Dr. (#11) – v/c > 0.01 or more during the AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – v/c > 0.01 during the PM peak hour
- Santa Anita Av. & Valley Bl. (#23) – v/c > 0.01 during the AM peak hour

EXHIBIT 5-1: E+P AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

EXHIBIT 5-2: E+P TRAFFIC VOLUMES (IN PCE)

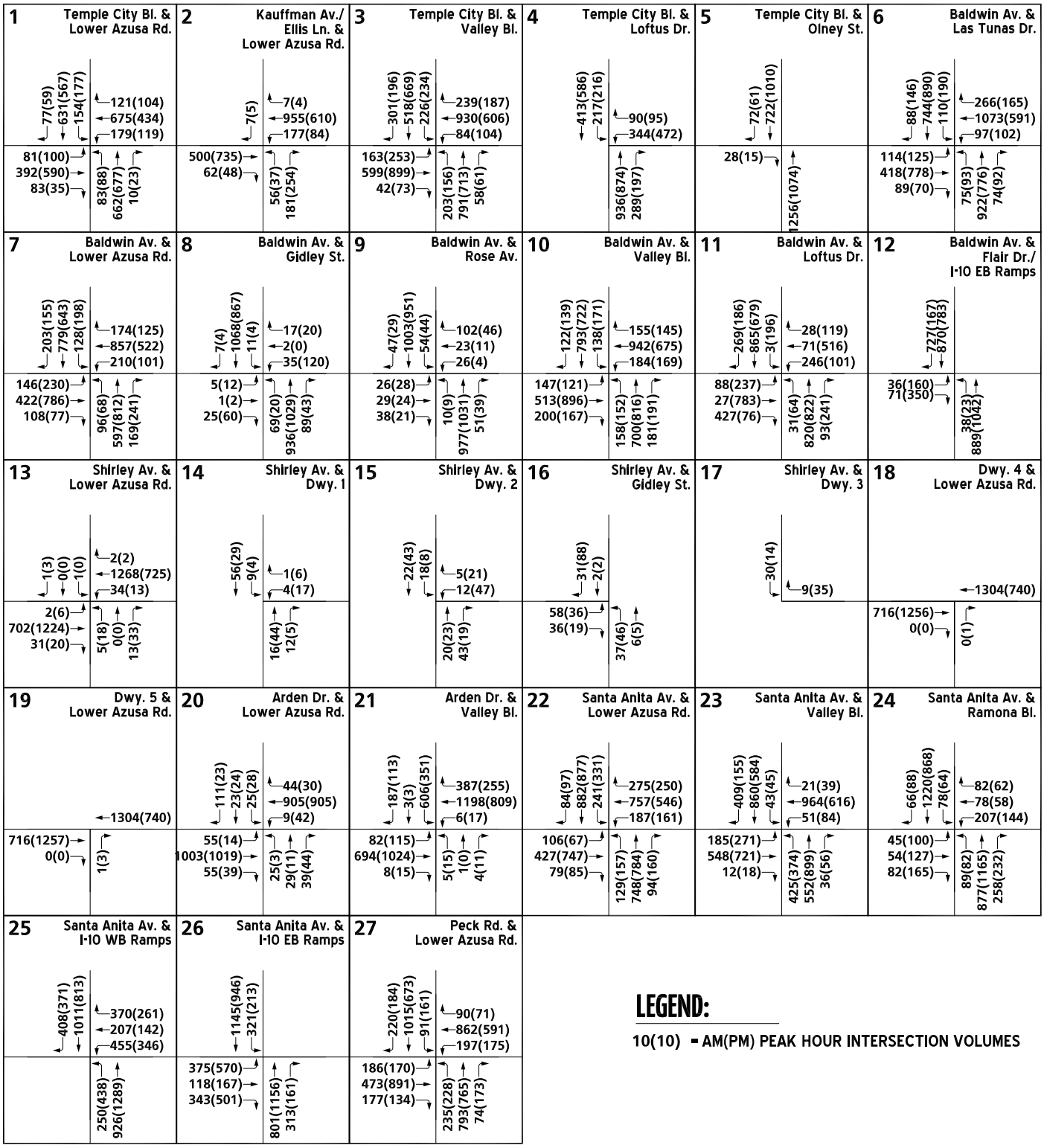


Table 5-1

Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control[3]	Existing (2017) ICU or Delay[2] (v/c or secs.) AM	Existing (2017) ICU or Delay[2] (v/c or secs.) PM	Existing (2017) Level of Service AM	Existing (2017) Level of Service PM	E+P ICU or Delay[2] (v/c or secs.) AM	E+P ICU or Delay[2] (v/c or secs.) PM	E+P Level of Service AM	E+P Level of Service PM	Change in ICU or Delay AM	Change in ICU or Delay PM	Significant Impact?
1	Temple City Bl. & Lower Azusa Rd.	TS	0.703	0.698	C	B	0.706	0.699	C	B	0.003	0.001	No
2	Ellis Ln. & Lower Azusa Rd.	CSS	32.0	23.1	D	C	32.4	23.3	D	C	0.4	0.2	No
3	Temple City Bl. & Valley Bl.	TS	0.897	0.833	D	D	0.899	0.836	D	D	0.002	0.003	No
4	Temple City Bl. & Loftus Dr.	TS	0.717	0.705	C	C	0.726	0.717	C	C	0.009	0.012	No
5	Temple City Bl. & Olney St.	CSS	14.5	18.6	B	C	14.6	19.5	B	C	0.1	0.9	No
6	Baldwin Av. & Las Tunas Dr.	TS	0.863	0.787	D	C	0.863	0.790	D	C	0.000	0.003	No
7	Baldwin Av. & Lower Azusa Rd.	TS	0.814	0.817	D	D	0.817	0.823	D	D	0.003	0.006	No
8	Baldwin Av. & Gidley St.	TS	0.513	0.488	A	A	0.528	0.563	A	A	0.015	0.075	No
9	Baldwin Av. & Rose Av.	TS	0.538	0.507	A	A	0.560	0.517	A	A	0.022	0.010	No
10	Baldwin Av. & Valley Bl.	TS	0.858	0.833	D	D	0.871	0.848	D	D	0.013	**0.015**	**Yes**
11	Baldwin Av. & Loftus Dr.	TS	**1.137**	**1.351**	**F**	**F**	**1.143**	**1.367**	**F**	**F**	**0.006**	**0.016**	**Yes**
	General Plan Land Use Mix:	*TS*					***1.173***	***1.549***	***F***	***F***			
12	Baldwin Av. & Flair Dr.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	--[4]	--[4]	No[5]
13	Shirley Av. & Lower Azusa Rd.	CSS	25.5	20.5	D	C	26.3	26.4	D	D	0.8	5.9	No
14	Shirley Av. & Driveway 1	**CSS**	Future Intersection				8.9	8.9	A	A			--
15	Shirley Av. & Driveway 2	**CSS**	Future Intersection				9.0	9.2	A	A			--
16	Shirley Av. & Gidley St.	AWS	7.1	7.0	A	A	7.6	7.4	A	A	0.5	0.4	No
17	Shirley Av. & Driveway 3	**CSS**	Future Intersection				0.0	0.0	A	A			--
18	Driveway 4 & Lower Azusa Rd.	**CSS**	Future Intersection				0.0	14.1	A	B			--
19	Driveway 5 & Lower Azusa Rd.	**CSS**	Future Intersection				10.9	14.2	B	B			--
20	Arden Dr. & Lower Azusa Rd.	TS	0.518	0.497	A	A	0.521	0.502	A	A	0.003	0.005	No
21	Arden Dr. & Valley Bl.	TS	0.715	0.635	C	B	0.722	0.639	C	B	0.007	0.004	No
22	Santa Anita Av. & Lower Azusa Rd.	TS	0.869	**0.908**	D	**E**	0.873	**0.913**	D	**E**	0.004	**0.005**	**Yes**
23	Santa Anita Av. & Valley Bl.	TS	**0.914**	0.742	**E**	C	**0.921**	0.745	**E**	C	**0.007**	0.003	**Yes**
24	Santa Anita Av. & Ramona Bl.	TS	0.585	0.667	A	B	0.585	0.669	A	B	0.000	0.002	No
25	Santa Anita Av. & I-10 WB Ramps	TS	19.0	19.2	B	B	19.1	19.2	B	B	0.1	0.0	No
26	Santa Anita Av. & I-10 EB Ramps	TS	17.5	21.7	B	C	17.5	21.7	B	C	0.0	0.0	No
27	Peck Rd. & Lower Azusa Rd.	TS	**0.974**	0.878	**E**	D	**0.978**	0.882	**E**	D	0.004	0.004	No

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d= Defacto Right Turn Lane

[2] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for unsignalized all-way stop controlled intersections. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements haring a single lane) are shown. The Intersection Capacity Utilization (ICU) volume-to-capacity ratio has been reported for all signalized intersections.

[3] CSS = Cross Street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[4] Change in delay to the side-street (Flair Drive) left turn movement is anticipated to be greater than 2.0 seconds.

[5] The proposed Project is not anticipated to contribute any traffic to the deficient eastbound left turn movement (on Flair Dr.). As such, the impact is anticipated to be less than significant.

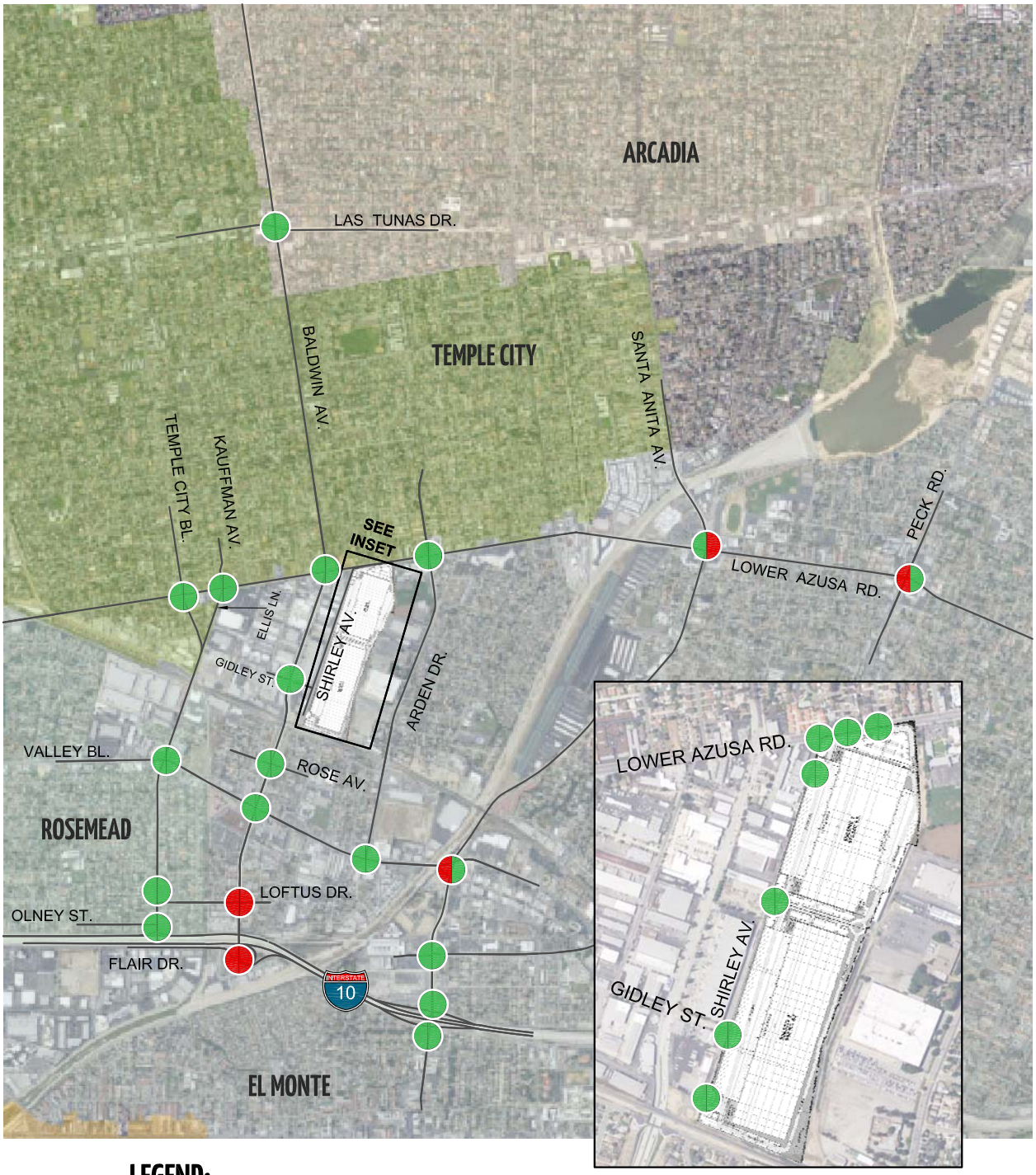
An analysis also was conducted to determine whether the Project would result in new or more severe impacts as compared to the impacts disclosed in the General Plan Update EIR and considered in the General Plan Update EIR's traffic analysis. As shown previously on Table 4-4, the General Plan Update EIR assumed that the 55.86-acre property would be developed with a mix of general light industrial (30%), industrial park (40%), manufacturing (10%), or warehousing (20%) uses. The Traffic Study for the General Plan Update EIR utilized a net blended trip rate for industrial land uses of 5.97 trips per 1,000 sf of building area, and assumed industrial areas would be developed at a floor area ratio (FAR) of 0.5. Thus, the General Plan Update EIR assumed that the 55.86-acre Project site would be developed with up to 1,216,630 sf of industrial uses that would generate 9,145 ADT (in PCE). As shown previously in Table 4-2, development of the 55.86-acre site with high-cube warehouse use would result in approximately 2,561 ADT (in PCE), or a reduction of 6,584 ADT (in PCE) as compared to the assumptions used in the General Plan Update EIR's traffic forecasts.

As indicated above, the addition of Project traffic would increase to the v/c ratio by 0.01 or more during the PM peak hour at the intersection of Baldwin Av. & Loftus Dr., which is a significant cumulative impact per the City of El Monte's significance threshold; thus, additional analysis has been conducted to evaluate whether this impact was considered in the General Plan Update EIR's Traffic Study. Table 5-1 compares the ICU at the intersection of Baldwin Av. & Loftus Dr. as reported in the General Plan Update EIR traffic analysis to the ICU that would occur under the proposed Project. As shown, redevelopment of the 55.86-acre Project site with high-cube warehouse uses as proposed by the Project would result in a net reduction in the ICU by between 0.030 and 0.182 as compared to the traffic results in the General Plan Update EIR.

Although the General Plan Update EIR's traffic study did not specifically discuss the intersection of Baldwin Av. & Loftus Dr., the traffic forecasts utilized in the General Plan Update EIR's Traffic Study could be determined for the intersection of Baldwin Av. & Loftus Dr. Additionally, the General Plan Update EIR and its traffic study contained enough information about deficiencies at adjacent intersections that with the exercise of reasonable diligence and/or a review of the General Plan Update EIR traffic forecasts, the traffic impacts resulting from General Plan Buildout to intersections throughout the City, including the intersection of Baldwin Av. & Loftus Dr., was available to the public and part of the General Plan Update EIR public record. Furthermore, and as shown in Table 5-1, the proposed Project would result in less traffic at the intersection of Baldwin Av. & Loftus Dr. as compared to amount of traffic that the General Plan Update EIR assumed would be generated by buildout of the Project site. Thus, it can be clearly concluded that the Project's generated traffic volume and cumulative impacts are within the scope of analysis and level of impacts disclosed as part of the General Plan Update EIR public record, and the Project would not result in any new impacts or increase the severity of a previously-identified significant impact as analyzed in the General Plan Update EIR.

Exhibit 5-3 summarizes the AM and PM peak hour study area intersection LOS under E+P traffic conditions. These are consistent with the results for E+P shown on Table 5-1. The intersection operations analysis worksheets for each phase are included in Appendices 5.1 of this TIA. Measures to address deficiencies for E+P traffic conditions are discussed in Section 5.6 *Recommended Improvements*.

EXHIBIT 5-3: E+P SUMMARY OF LOS



LEGEND:

- = AM PEAK HOUR ACCEPTABLE LOS
- = AM PEAK HOUR DEFICIENT LOS
- = PM PEAK HOUR ACCEPTABLE LOS
- = PM PEAK HOUR DEFICIENT LOS

N

5.4 ROADWAY SEGMENT CAPACITY ANALYSIS

Table 5-2 provides a summary of the E+P conditions roadway segment capacity analysis based on the City of El Monte Roadway Segment Capacity Thresholds in the General Plan Update EIR. Consistent with Existing (2017) traffic conditions, the study area roadway segments are anticipated to continue to operate at an acceptable LOS with the addition of Project traffic based on the City's peak hour planning level roadway capacity thresholds.

5.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

For E+P conditions, there are no additional study area intersections anticipated to meet either peak hour volume based or planning level ADT traffic signal warrants, in addition to the location previously warranted under Existing (2017) traffic conditions (see Appendix 5.2).

5.6 RECOMMENDED IMPROVEMENTS

5.6.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

Improvement strategies have been recommended for those intersections identified as deficient under E+P traffic conditions. The effectiveness of the proposed recommended improvements is presented in Table 5-3 for E+P traffic conditions. Recommended improvements to address deficiencies for E+P traffic conditions are described below.

The addition of Project traffic to Opening Year Cumulative (2020) traffic conditions is anticipated to result in an increase to the v/c ratio by 0.01 or more during the AM peak hour at the intersection of Baldwin Avenue and Valley Boulevard. As such, the cumulative impact is considered significant. The recommended improvement at the intersection of Baldwin Avenue and Valley Boulevard is consistent with that recommended in the General Plan Update EIR. The recommendation is to modify Valley Boulevard from Garey Avenue to the eastern City limit to implement a six-lane roadway through restriping. This recommended improvement reduces the impact to less than significant.

The addition of Project traffic is calculated to result in an increase to the v/c ratio by 0.01 or more during the PM peak hour at the intersection of Baldwin Av. & Loftus Dr. The recommendation to alleviate the impact at Baldwin Avenue and Loftus Drive is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane. Worksheets for E+P conditions, with improvements, are provided in Appendix 5.3.

As shown in Table 5-3, with the addition of Project traffic and the prohibition of parking and the provision of a westbound right turn lane at the Baldwin Av. & Loftus Dr. intersection, the ICU at the intersection would be reduced to 1.125 in the AM peak hour and 1.293 in the PM peak hour. As previously shown in Table 5-1, without the addition of Project traffic and implementation of the same recommendations, the intersection of Baldwin Av. & Loftus Dr. would have an ICU of 1.137 in the AM peak hour and 1.351 in the PM peak hour. Thus, with implementation of the recommendations (prohibition of parking and restriping to provide a westbound right turn lane at the intersection), the ICU at the intersection of Baldwin Av. & Loftus Dr. would be reduced in

comparison to existing, pre-Project conditions, indicating that operations at this intersection would be improved as compared to existing conditions.

Additionally, and as previously noted, when compared to the impacts reported by the General Plan Update EIR's traffic results, the Project would result in a net reduction in the ICU at the intersection of Baldwin Av. & Loftus Dr. This is because the Project's proposed high-cube warehousing use would generate less traffic than the blended trip rate for general light industrial, industrial park, manufacturing, and warehousing uses that was assumed for the Project site in the General Plan Update EIR's traffic analysis. Thus, although improvements are recommended to reduce the v/c at the intersection of Baldwin Av. & Loftus Dr., the improvements are not considered mitigation under CEQA to address a new or more severe impact because the Project's ICU at the intersection of Baldwin Av. & Loftus Dr. would actually be reduced as compared to ICU reported by the General Plan Update EIR traffic analysis. Although this intersection was not specifically discussed in the General Plan Update EIR, according to the General Plan Update EIR's traffic analysis, the Project's traffic impacts are clearly within the scope of analysis of the General Plan Update EIR and the Project would not result in any new impacts or increase the severity of a previously-identified significant impact as analyzed in the General Plan Update EIR.

Consistent with the recommended improvement in the General Plan Update EIR, eliminating the on-street parking and restriping the northbound approach to accommodate a 3rd northbound through lane would reduce the impact to less than significant at the intersection of Santa Anita Avenue and Lower Azusa Road for E+P traffic conditions.

In conjunction with the recommended northbound right turn lane from the General Plan Update EIR, a southbound right turn lane is also necessary at the intersection of Santa Anita Avenue and Valley Boulevard in order to reduce the impact to less than significant for E+P traffic conditions.

5.6.2 Recommended Improvements to Address Deficiencies on Roadway Segments

As shown on Table 5-2, there are no deficient roadway segments in the study area. As such, no roadway segment improvements have been recommended for E+P traffic conditions.

Table 5-2

Roadway Segment Capacity Analysis for E+P Conditions

#	Roadway	Segment Limits	Eastbound/Northbound					Westbound/Southbound					Eastbound/Northbound			Westbound/Southbound			Acceptable LOS
			# of Lanes	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	# of Lanes	LOS Capacity[1]	Existing (2017)	V/C[2]	LOS[3]	E+P	V/C[2]	LOS[3]	E+P	V/C[2]	LOS[3]	
1	Lower Azusa Rd.	Baldwin Av. to Arden Dr.																	E
		AM Peak Hour:	2	1,400	1,108	0.79	C	2	1400	1,237	0.88	D	1,113	0.80	C	1,254	0.90	D	
		PM Peak Hour:	2	1,400	1,220	0.87	D	2	1400	924	0.66	B	1,239	0.89	D	931	0.67	B	
2	Lower Azusa Rd.	Arden Dr. to Santa Anita Av.																	E
		AM Peak Hour:	2	1400	1,063	0.76	C	2	1400	956	0.68	B	1,067	0.76	C	970	0.69	B	
		PM Peak Hour:	2	1400	1,075	0.77	C	2	1400	971	0.69	B	1,091	0.78	C	977	0.70	B	
3	Lower Azusa Rd.	Santa Anita Av. to Peck Rd.																	E
		AM Peak Hour:	2	1400	823	0.59	A	2	1400	1,303	0.93	E	827	0.59	A	1,317	0.94	E	
		PM Peak Hour:	2	1400	1,222	0.87	D	2	1400	997	0.71	C	1,238	0.88	D	1,003	0.72	C	
4	Valley Bl.	Baldwin Av. to Arden Dr.																	E
		AM Peak Hour:	2	1600	829	0.52	A	2	1600	1,368	0.86	D	832	0.52	A	1,390	0.87	D	
		PM Peak Hour:	2	1600	1,245	0.78	C	2	1600	979	0.61	B	1,258	0.79	C	989	0.62	B	
5	Valley Bl.	Santa Anita Av. to Tyler Av.																	E
		AM Peak Hour:	2	1600	625	0.39	A	2	1600	1,030	0.64	B	627	0.39	A	1,036	0.65	B	
		PM Peak Hour:	2	1600	815	0.51	A	2	1600	736	0.46	A	822	0.51	A	739	0.46	A	
6	Baldwin Av.	Lower Azusa Rd. to Valley Bl.																	D
		AM Peak Hour:	2	1600	922	0.58	A	2	1600	1,092	0.68	B	1,002	0.63	B	1,115	0.70	B	
		PM Peak Hour:	2	1600	1,113	0.70	B	2	1600	939	0.59	A	1,149	0.72	C	1,032	0.65	B	
7	Baldwin Av.	Valley Bl. to I-10 Freeway																	E
		AM Peak Hour:	2	1600	912	0.57	A	2	1600	1,529	0.96	E	944	0.59	A	1,538	0.96	E	
		PM Peak Hour:	2	1600	1,138	0.71	C	2	1600	991	0.62	B	1,152	0.72	C	1,028	0.64	B	
8	Santa Anita Av.	Valley Bl. to Ramona Bl.																	D
		AM Peak Hour:	3	2400	997	0.42	A	3	2400	1,362	0.57	A	1,013	0.42	A	1,364	0.57	A	
		PM Peak Hour:	3	2400	1,322	0.55	A	3	2400	1,014	0.42	A	1,329	0.55	A	1,020	0.43	A	
9	Santa Anita Av.	Ramona Bl. to I-10 Freeway																	E
		AM Peak Hour:	3	2400	1,208	0.50	A	3	2400	1,507	0.63	B	1,220	0.51	A	1,509	0.63	B	
		PM Peak Hour:	3	2400	1,472	0.61	B	3	2400	1,171	0.49	A	1,479	0.62	B	1,177	0.49	A	

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] These maximum roadway capacities have been extracted from the following source: City of El Monte General Plan EIR (Table 5.13-2). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

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Table 5-3

Intersection Analysis for E+P Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												ICU or Delay[2] (v/c or secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
10	Baldwin Av. & Valley Bl.																	
	- Without Improvements	TS	1	2	1	1	2	0	1	2	d	1	2	d	0.871	0.848	D	D
	- With Improvements[5]	TS	1	2	1	1	2	0	1	**3**	**0**	1	**3**	**0**	0.805	0.789	D	C
11	Baldwin Av. & Loftus Dr.																	
	- Without Improvements	TS	1	2	0	1	1	1	0	2	0	0	1	0	**1.143**	**1.367**	**F**	**F**
	- With Improvements[4]	TS	1	2	0	1	1	1	0	2	0	0	1	**1**	**1.125**	**1.293**	**F**	**F**
22	Santa Anita Av. & Lower Azusa Rd.																	
	- Without Improvements	TS	1	2	1	1	2	d	1	2	0	1	2	0	0.873	**0.913**	D	**E**
	- With Improvements[5]	TS	1	**3**	**0**	1	2	d	1	2	0	1	2	0	0.845	0.864	D	D
23	Santa Anita Av. & Valley Bl.																	
	- Without Improvements	TS	2	3	0	1	3	0	1	2	0	2	2	0	**0.921**	0.745	**E**	C
	- With Improvements	TS	2	3	**1**	1	3	**1**	1	2	0	2	2	0	**0.912**	0.713	**E**	C

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d= Defacto Right Turn Lane; **1** = Improvement

[2] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for unsignalized all-way stop controlled intersections. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements haring a single lane) are shown. The Intersection Capacity Utilization (ICU) volume-to-capacity ratio has been reported for all signalized intersections.

[3] TS = Traffic Signal

[4] Recommendation is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane. Improvement will reduce the impact to less than significant levels.

[5] Prohibit on-street parking during the peak hours to accommodate the recommended restriping.

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6 OPENING YEAR CUMULATIVE (2020) TRAFFIC CONDITIONS

This section discusses the methods used to develop Opening Year Cumulative (2020) Without and With Project traffic forecasts, and the resulting intersection operations, roadway segment operations, and traffic signal warrant analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2020) conditions are as follows:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the Project and cumulative development's frontage and driveways). Improvements include construction of site adjacent roadways and intersections needed for site access.
- Driveways and those facilities assumed to be constructed by other development projects to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the cumulative development's frontage and driveways).

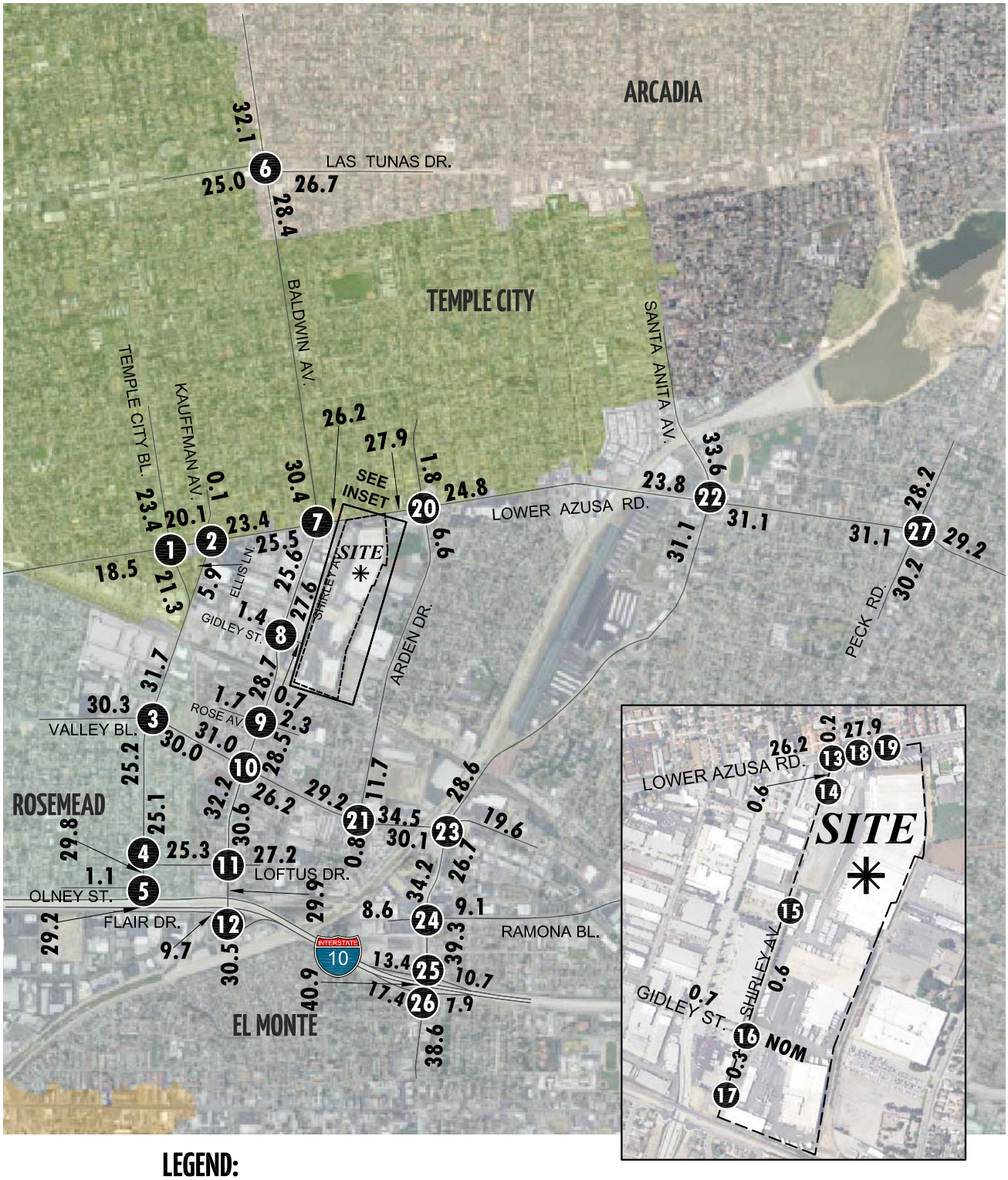
6.2 OPENING YEAR CUMULATIVE (2020) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 1.49% plus traffic from pending and approved but not yet constructed known development projects in the area. The ADT and AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2020) Without Project traffic conditions are shown on Exhibits 6-1 and 6-2, respectively.

6.3 OPENING YEAR CUMULATIVE (2020) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes, an ambient growth factor of 1.49%, traffic from pending and approved but not yet constructed known development projects in the area and the addition of Project traffic. The ADT and AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2020) With Project traffic conditions are shown on Exhibits 6-3 and 6-4, respectively.

EXHIBIT 6-1: OPENING YEAR CUMULATIVE (2020) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

EXHIBIT 6-2: OPENING YEAR CUMULATIVE (2020) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)

1 Temple City Bl. & Lower Azusa Rd.
77(59) 634(571) 152(177)
121(102) 679(437) 179(119)
81(100) 395(593) 91(51)
93(100) 665(681) 10(23)

2 Kauffman Av./ Ellis Ln. & Lower Azusa Rd.
7(5)
7(4) 960(611) 177(84)
501(738) 62(48)
56(37) 181(254)

3 Temple City Bl. & Valley Bl.
301(196) 518(669) 237(254)
252(203) 935(605) 106(128)
163(253) 597(906) 42(73)
203(156) 791(713) 70(86)

4 Temple City Bl. & Loftus Dr.
435(610) 217(216)
90(95) 336(441)
948(899) 274(190)

5 Temple City Bl. & Olney St.
72(61) 737(1003)
28(15)
1252(1092)

6 Baldwin Av. & Las Tunas Dr.
88(146) 750(906) 110(190)
266(165) 1073(591) 97(107)
114(125) 418(778) 89(70)
75(93) 934(786) 77(94)

7 Baldwin Av. & Lower Azusa Rd.
203(155) 788(665) 126(198)
174(123) 860(525) 218(115)
146(230) 423(788) 107(79)
98(66) 612(826) 180(253)

8 Baldwin Av. & Gidley St.
7(4) 1090(906) 6(2)
15(13) 2(0) 12(27)
5(12) 1(2) 25(60)
69(20) 965(1061) 9(8)

9 Baldwin Av. & Rose Av.
47(29) 1014(903) 54(44)
102(46) 23(11) 26(4)
26(28) 29(24) 38(21)
10(9) 928(1038) 51(39)

10 Baldwin Av. & Valley Bl.
141(155) 783(661) 141(168)
144(149) 952(684) 184(169)
151(137) 518(911) 217(191)
175(179) 658(802) 181(191)

11 Baldwin Av. & Loftus Dr.
261(155) 880(672) 3(196)
28(119) 71(516) 246(101)
73(230) 27(783) 427(76)
31(64) 809(841) 93(241)

12 Baldwin Av. & Flair Dr./ I-10 EB Ramps
727(167) 885(776)
36(160) 71(350)
38(23) 878(1061)

13 Shirley Av. & Lower Azusa Rd.
1(3) 0(0) 1(0)
2(2) 1283(751) 19(6)
2(6) 724(1243) 19(15)
2(6) 0(0) 9(18)

14 Shirley Av. & Dwy. 1
Future Intersection

15 Shirley Av. & Dwy. 2
Future Intersection

16 Shirley Av. & Gidley St.
15(24) 2(2) 1(0)
0(1) 2(0) 0(0)
3(12) 0(0) 6(5)
28(11) 6(5) 0(0)

17 Shirley Av. & Dwy. 3
Future Intersection

18 Dwy. 4 & Lower Azusa Rd.
Future Intersection

19 Dwy. 5 & Lower Azusa Rd.
Future Intersection

20 Arden Dr. & Lower Azusa Rd.
109(23) 23(24) 25(28)
44(30) 905(924) 12(44)
55(12) 1020(1021) 55(39)
25(3) 29(11) 41(48)

21 Arden Dr. & Valley Bl.
187(113) 3(3) 610(359)
395(261) 1198(823) 6(17)
82(115) 702(1036) 8(15)
5(15) 1(0) 4(11)

22 Santa Anita Av. & Lower Azusa Rd.
84(97) 885(885) 246(334)
278(255) 761(567) 197(181)
106(67) 445(753) 79(85)
129(157) 753(789) 108(174)

23 Santa Anita Av. & Valley Bl.
410(156) 871(609) 43(46)
22(39) 959(614) 51(84)
186(272) 547(715) 23(42)
436(394) 570(916) 36(56)

24 Santa Anita Av. & Ramona Bl.
66(88) 1282(928) 87(72)
87(76) 78(58) 207(144)
45(100) 54(127) 82(165)
89(82) 906(1257) 258(232)

25 Santa Anita Av. & I-10 WB Ramps
428(392) 1053(851)
382(306) 207(142) 455(346)
250(438) 944(1336)

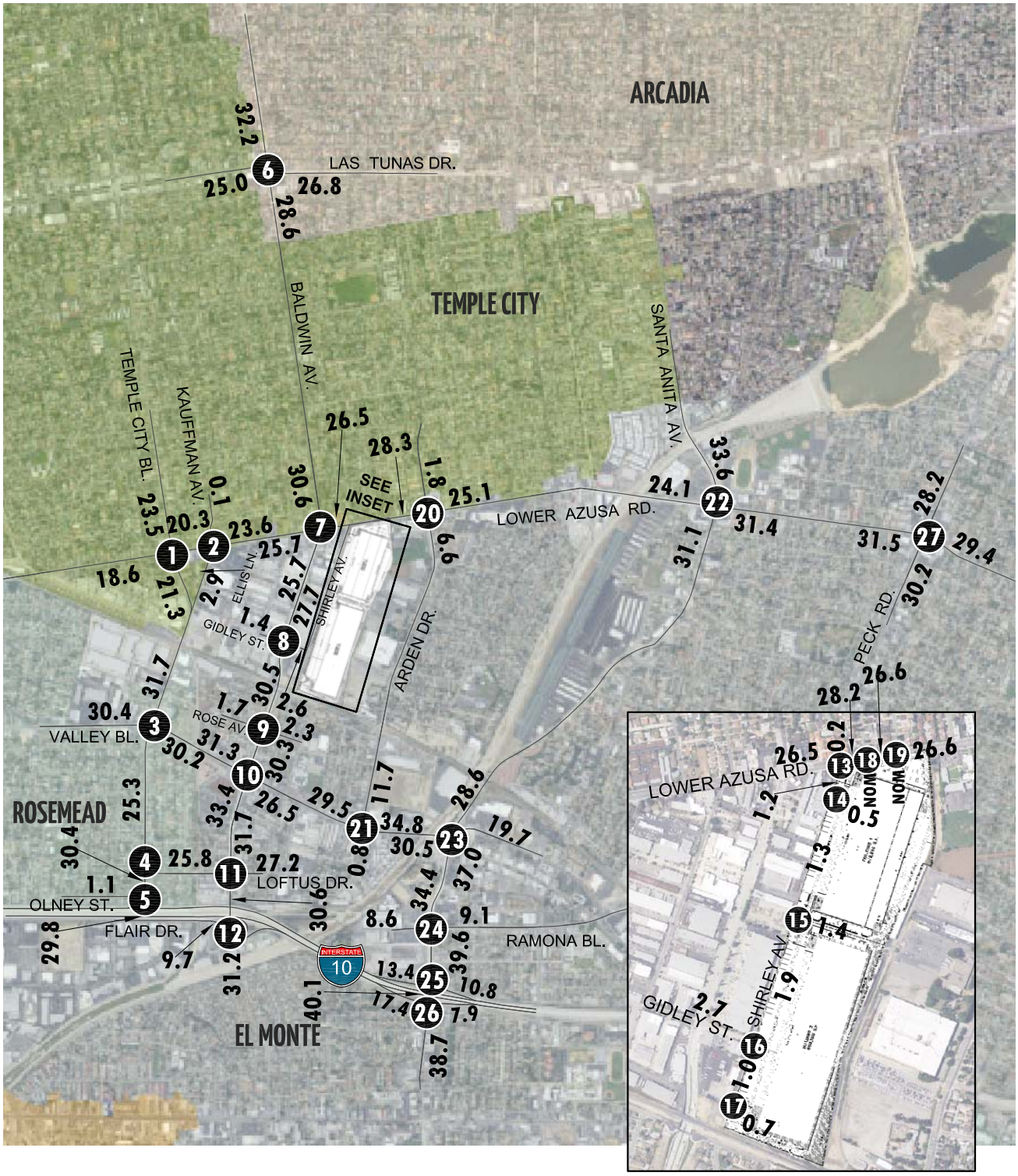
26 Santa Anita Av. & I-10 EB Ramps
1158(955) 350(243)
388(600) 118(167) 343(501)
805(1173) 313(161)

27 Peck Rd. & Lower Azusa Rd.
218(184) 1016(676) 94(162)
91(74) 871(631) 199(182)
186(168) 507(906) 181(144)
245(234) 796(767) 81(175)

LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

EXHIBIT 6-3: OPENING YEAR CUMULATIVE (2020) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT)

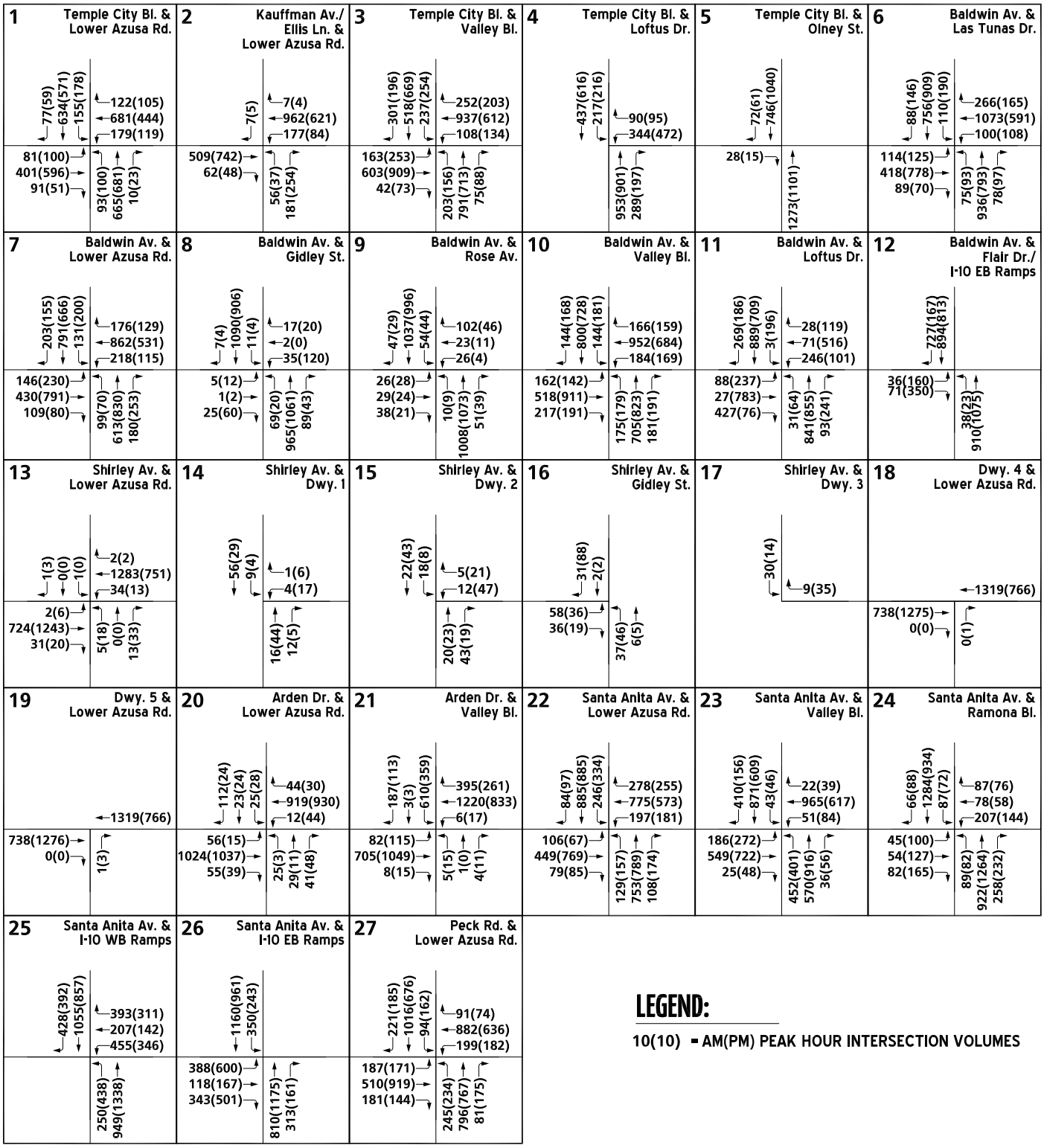


LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

EXHIBIT 6-4: OPENING YEAR CUMULATIVE (2020) WITH PROJECT TRAFFIC VOLUMES (IN PCE)



6.4 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under Opening Year Cumulative (2020) Without Project conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. The intersection analysis results are summarized in Table 6-1, which indicates that the following intersections are anticipated to experience unacceptable LOS (i.e., LOS E or worse) during one or more peak hours for Opening Year Cumulative (2020) Without Project traffic conditions, consistent with Existing (2017) traffic conditions:

- Baldwin Av. & Loftus Dr. (#11) – LOS F AM and PM peak hours
- Baldwin Av. & Flair Dr. (#12) – LOS F AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – LOS E PM peak hour only
- Santa Anita Av. & Valley Bl. (#23) – LOS E AM peak hour only
- Peck Rd. & Lower Azusa Rd. (#27) – LOS E AM peak hour only

Exhibit 6-5 summarizes the AM and PM peak hour study area intersection LOS under Opening Year Cumulative (2020) Without Project traffic conditions, consistent with the summary provided in Table 6-1. The intersection operations analysis worksheets for Opening Year Cumulative (2020) Without Project conditions are included in Appendix 6.1 of this TIA.

As shown on Table 6-1 and illustrated on Exhibit 6-6, the addition of Project traffic is not anticipated to result in any additional LOS deficiencies, in addition to those previously identified under Opening Year Cumulative (2020) Without Project traffic conditions, however, the v/c is anticipated to increase by 0.01 or more at the following intersections, resulting in a significant cumulative impact for Opening Year Cumulative (2020) With Project traffic conditions:

- Baldwin Av. & Valley Bl. (#10) – LOS E in the AM peak hour; v/c > 0.02 during the PM peak hour
- Baldwin Av. & Loftus Dr. (#11) – v/c > 0.01 or more during the AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – v/c > 0.01 during the PM peak hour
- Santa Anita Av. & Valley Bl. (#23) – v/c > 0.01 during the AM peak hour
- Peck Rd. & Lower Azusa Rd. (#27) – v/c > 0.01 during the AM peak hour

As indicated above, the addition of Project traffic would increase to the v/c ratio by 0.01 or more during the PM peak hour at the intersection of Baldwin Av. & Loftus Dr., which is a significant cumulative impact per the City of El Monte's significance threshold; thus, additional analysis has been conducted to evaluate whether this impact was considered in the General Plan Update EIR's Traffic Study. Table 6-1 compares the ICU at the intersection of Baldwin Av. & Loftus Dr. as reported in the General Plan Update EIR traffic analysis to the ICU that would occur under the proposed Project. As shown, redevelopment of the 55.86-acre Project site with high-cube warehouse uses as proposed by the Project would result in a net reduction in the ICU by between 0.030 and 0.182 as compared to the traffic results in the General Plan Update EIR.

Table 6-1

Intersection Analysis for Opening Year Cumulative (2020) Conditions

#	Intersection	Traffic Control[3]	2020 Without Project ICU or Delay[2] (v/c or secs.) AM	2020 Without Project ICU or Delay[2] (v/c or secs.) PM	2020 Without Project Level of Service AM	2020 Without Project Level of Service PM	2020 With Project ICU or Delay[2] (v/c or secs.) AM	2020 With Project ICU or Delay[2] (v/c or secs.) PM	2020 With Project Level of Service AM	2020 With Project Level of Service PM	Change in ICU or Delay AM	Change in ICU or Delay PM	Significant Impact?
1	Temple City Bl. & Lower Azusa Rd.	TS	0.707	0.706	C	C	0.709	0.708	C	C	0.002	0.002	No
2	Ellis Ln. & Lower Azusa Rd.	CSS	32.4	23.4	D	C	32.6	23.7	D	C	0.2	0.3	No
3	Temple City Bl. & Valley Bl.[4]	TS	0.911	0.872	E	D	0.913	0.877	E	D	0.002	0.005	No
4	Temple City Bl. & Loftus Dr.	TS	0.722	0.713	C	C	0.731	0.726	C	C	0.009	0.013	No
5	Temple City Bl. & Olney St.	CSS	14.8	19.3	B	C	15.0	20.1	C	C	0.2	0.8	No
6	Baldwin Av. & Las Tunas Dr.	TS	0.867	0.796	D	C	0.868	0.799	D	C	0.001	0.003	No
7	Baldwin Av. & Lower Azusa Rd.	TS	0.822	0.828	D	D	0.825	0.834	D	D	0.003	0.006	No
8	Baldwin Av. & Gidley St.	TS	0.520	0.498	A	A	0.535	0.573	A	A	0.015	0.075	No
9	Baldwin Av. & Rose Av.	TS	0.548	0.520	A	A	0.575	0.531	A	A	0.027	0.011	No
10	Baldwin Av. & Valley Bl.	TS	0.890	0.857	D	D	**0.903**	0.882	**E**	D	**0.013**	**0.025**	**Yes**
11	Baldwin Av. & Loftus Dr.	TS	**1.152**	**1.361**	**F**	**F**	**1.158**	**1.386**	**F**	**F**	**0.006**	**0.025**	**Yes**
	General Plan Land Use Mix:	*TS*					***1.188***	***1.568***	***F***	***F***			
12	Baldwin Av. & Flair Dr.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	--[5]	--[5]	No[6]
13	Shirley Av. & Lower Azusa Rd.	CSS	26.0	21.1	D	C	26.9	27.2	D	D	0.9	6.1	No
14	Shirley Av. & Driveway 1	**CSS**	Future Intersection				8.9	8.9	A	A			--
15	Shirley Av. & Driveway 2	**CSS**	Future Intersection				9.0	9.2	A	A			--
16	Shirley Av. & Gidley St.	AWS	7.1	7.0	A	A	7.6	7.4	A	A	0.5	0.4	No
17	Shirley Av. & Driveway 3	**CSS**	Future Intersection				0.0	0.0	A	A			--
18	Driveway 4 & Lower Azusa Rd.	**CSS**	Future Intersection				0.0	14.3	A	B			--
19	Driveway 5 & Lower Azusa Rd.	**CSS**	Future Intersection				11.0	14.3	B	B			--
20	Arden Dr. & Lower Azusa Rd.	TS	0.527	0.506	A	A	0.530	0.511	A	A	0.003	0.005	No
21	Arden Dr. & Valley Bl.	TS	0.723	0.643	C	B	0.730	0.647	C	B	0.007	0.004	No
22	Santa Anita Av. & Lower Azusa Rd.	TS	0.880	**0.930**	D	**E**	0.884	**0.935**	D	**E**	0.004	**0.005**	**Yes**
23	Santa Anita Av. & Valley Bl.	TS	**0.926**	0.757	**E**	C	**0.933**	0.760	**E**	C	**0.007**	0.003	**Yes**
24	Santa Anita Av. & Ramona Bl.	TS	0.599	0.696	A	B	0.599	0.697	A	B	0.000	0.001	No
25	Santa Anita Av. & I-10 WB Ramps	TS	19.2	19.4	B	B	19.2	19.5	B	B	0.0	0.1	No
26	Santa Anita Av. & I-10 EB Ramps	TS	19.3	23.0	B	C	19.3	23.1	B	C	0.0	0.1	No
27	Peck Rd. & Lower Azusa Rd.	TS	**0.987**	0.899	**E**	D	**0.992**	**0.903**	**E**	**E**	**0.005**	0.004	**Yes**

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d= Defacto Right Turn Lane

[2] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for unsignalized all-way stop controlled intersections. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements haring a single lane) are shown. The Intersection Capacity Utilization (ICU) volume-to-capacity ratio has been reported for all signalized intersections.

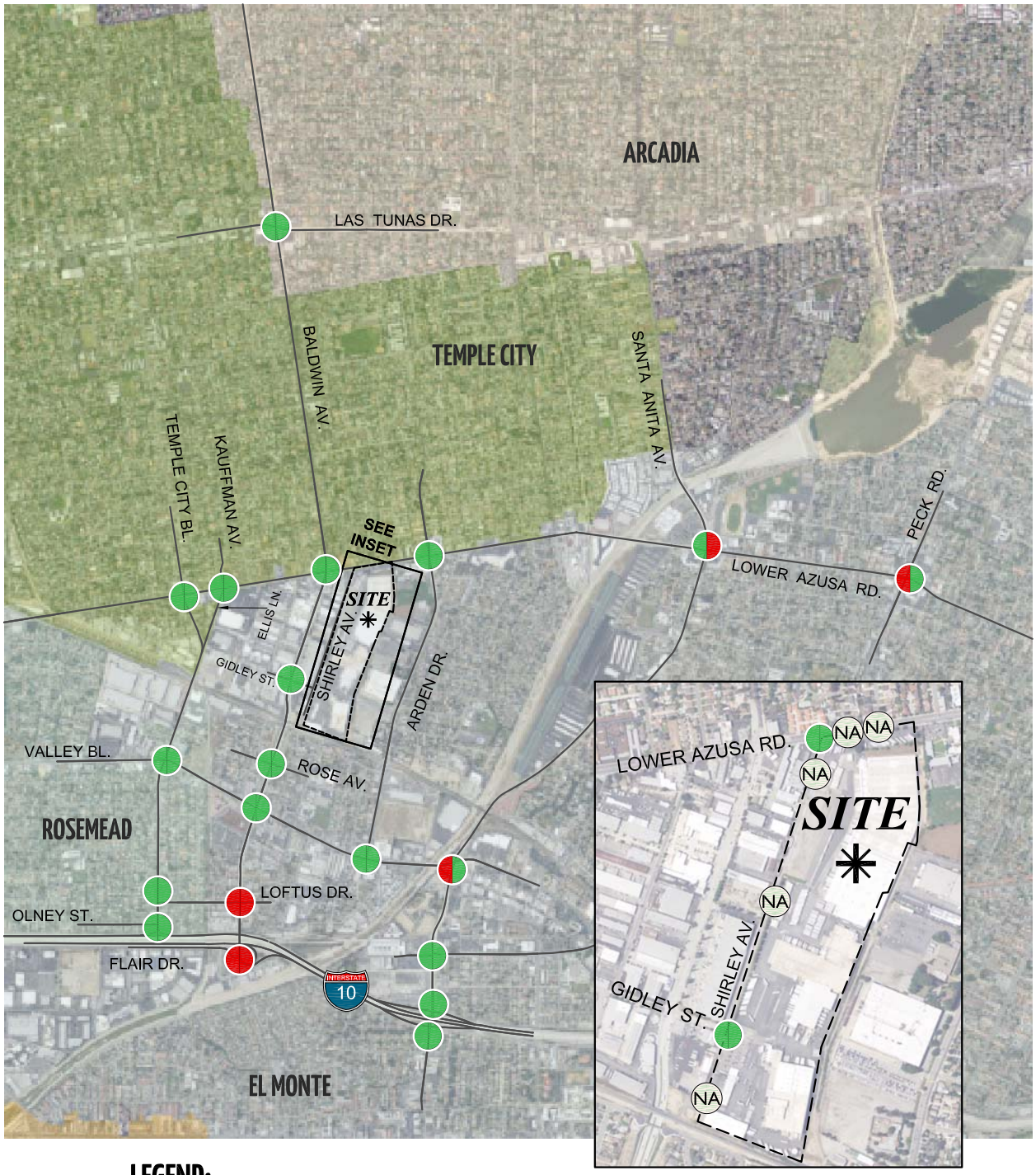
[3] CSS = Cross Street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[4] Policy CI-1 of the City of Arcadia General Plan Circulation and Infrastructure Element recognizes LOS E as an acceptable LOS at intersections along Baldwin Av.

[5] Change in delay to the side-street (Flair Drive) left turn movement is anticipated to be greater than 2.0 seconds.

[6] The proposed Project is not anticipated to contribute any traffic to the deficient eastbound left turn movement (on Flair Dr.). As such, the impact is anticipated to be less than significant.

EXHIBIT 6-5: OPENING YEAR CUMULATIVE (2020) WITHOUT PROJECT SUMMARY OF LOS

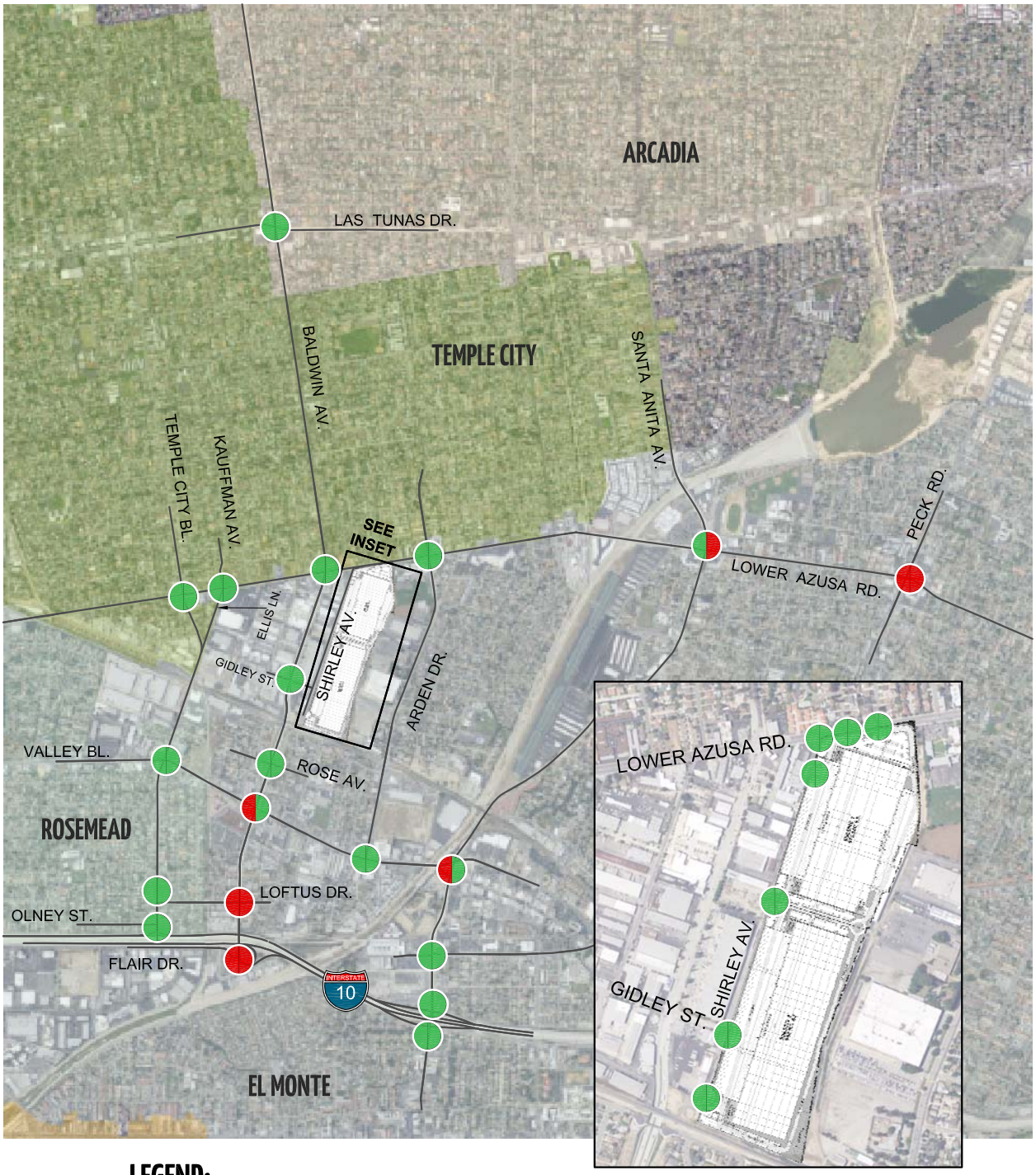


LEGEND:

- = AM PEAK HOUR ACCEPTABLE LOS
- = AM PEAK HOUR DEFICIENT LOS
- = PM PEAK HOUR ACCEPTABLE LOS
- = PM PEAK HOUR DEFICIENT LOS
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

N

EXHIBIT 6-6: OPENING YEAR CUMULATIVE (2020) WITH PROJECT SUMMARY OF LOS



LEGEND:

- = AM PEAK HOUR ACCEPTABLE LOS
- = AM PEAK HOUR DEFICIENT LOS
- = PM PEAK HOUR ACCEPTABLE LOS
- = PM PEAK HOUR DEFICIENT LOS

N

Although the General Plan Update EIR's traffic study did not specifically discuss the intersection of Baldwin Av. & Loftus Dr., the traffic forecasts utilized in the General Plan Update EIR's Traffic Study could be determined for the intersection of Baldwin Av. & Loftus Dr. Additionally, the General Plan Update EIR and its traffic study contained enough information about deficiencies at adjacent intersections that with the exercise of reasonable diligence and/or a review of the General Plan Update EIR traffic forecasts, the traffic impacts resulting from General Plan Buildout to intersections throughout the City, including the intersection of Baldwin Av. & Loftus Dr., was available to the public and part of the General Plan Update EIR public record. Furthermore, and as shown in Table 6-1, the proposed Project would result in less traffic at the intersection of Baldwin Av. & Loftus Dr. as compared to amount of traffic that the General Plan Update EIR assumed would be generated by buildout of the Project site. Thus, it can be clearly concluded that the Project's generated traffic volume and cumulative impacts are within the scope of analysis and level of impacts disclosed as part of the General Plan Update EIR public record, and the Project would not result in any new impacts or increase the severity of a previously-identified significant impact as analyzed in the General Plan Update EIR.

The intersection operations analysis worksheets for Opening Year Cumulative (2020) With Project traffic conditions are included in Appendix 6.2 of this TIA. Measures to address near-term deficiencies for Opening Year Cumulative traffic conditions are discussed in TIA Section 6.7 *Opening Year Cumulative (2020) Recommended Improvements.*

6.5 ROADWAY SEGMENT CAPACITY ANALYSIS

Table 6-2 provides a summary of the Opening Year Cumulative (2020) Without Project traffic conditions roadway segment capacity analysis based on the City of El Monte Roadway Segment Capacity Thresholds in the General Plan Update EIR. Consistent with Existing (2017) traffic conditions, the study area roadway segments are anticipated to operate at an acceptable LOS for Opening Year Cumulative (2020) Without Project traffic conditions. The study area roadway segments are anticipated to continue to operate at an acceptable LOS with the addition of Project traffic based on the City's peak hour planning level roadway capacity thresholds.

6.6 TRAFFIC SIGNAL WARRANTS ANALYSIS

For Opening Year Cumulative (2020) traffic conditions, there are no additional study area intersections anticipated to meet either peak hour volume based or planning level ADT traffic signal warrants, in addition to the location previously warranted under Existing (2017) traffic conditions (see Appendix 6.3 and Appendix 6.4).

Table 6-2

Roadway Segment Capacity Analysis for Opening Year Cumulative (2020) Conditions

			Eastbound/Northbound					Westbound/Southbound					Eastbound/Northbound			Westbound/Southbound			Acceptable
#	Roadway	Segment Limits	# of Lanes	LOS Capacity[1]	2020 NP	V/C[2]	LOS[3]	# of Lanes	LOS Capacity[1]	2020 NP	V/C[2]	LOS[3]	2020 WP	V/C[2]	LOS[3]	2020 WP	V/C[2]	LOS[3]	LOS
1	Lower Azusa Rd.	Baldwin Av. to Arden Dr.																	E
		AM Peak Hour:	2	1,400	1,130	0.81	D	2	1,400	1,252	0.89	D	1,135	0.81	D	1,269	0.91	E	
		PM Peak Hour:	2	1,400	1,239	0.89	D	2	1,400	951	0.68	B	1,258	0.90	D	958	0.68	B	
2	Lower Azusa Rd.	Arden Dr. to Santa Anita Av.																	E
		AM Peak Hour:	2	1400	1,085	0.78	C	2	1400	971	0.69	B	1,089	0.78	C	985	0.70	C	
		PM Peak Hour:	2	1400	1,097	0.78	C	2	1400	998	0.71	C	1,113	0.80	C	1,004	0.72	C	
3	Lower Azusa Rd.	Santa Anita Av. to Peck Rd.																	E
		AM Peak Hour:	2	1400	864	0.62	B	2	1400	1,334	0.95	E	868	0.62	B	1,348	0.96	E	
		PM Peak Hour:	2	1400	1,261	0.90	E	2	1400	1,049	0.75	C	1,277	0.91	E	1,055	0.75	C	
4	Valley Bl.	Baldwin Av. to Arden Dr.																	E
		AM Peak Hour:	2	1600	840	0.53	A	2	1600	1,389	0.87	D	843	0.53	A	1,411	0.88	D	
		PM Peak Hour:	2	1600	1,270	0.79	C	2	1600	1,002	0.63	B	1,283	0.80	D	1,012	0.63	B	
5	Valley Bl.	Santa Anita Av. to Tyler Av.																	E
		AM Peak Hour:	2	1600	626	0.39	A	2	1600	1,032	0.65	B	628	0.39	A	1,038	0.65	B	
		PM Peak Hour:	2	1600	817	0.51	A	2	1600	737	0.46	A	824	0.52	A	740	0.46	A	
6	Baldwin Av.	Lower Azusa Rd. to Valley Bl.																	D
		AM Peak Hour:	2	1600	952	0.60	A	2	1600	1,113	0.70	B	1,032	0.65	B	1,136	0.71	C	
		PM Peak Hour:	2	1600	1,145	0.72	C	2	1600	979	0.61	B	1,181	0.74	C	1,072	0.67	B	
7	Baldwin Av.	Valley Bl. to I-10 Freeway																	E
		AM Peak Hour:	2	1600	934	0.58	A	2	1600	1,553	0.97	E	966	0.60	B	1,562	0.98	E	
		PM Peak Hour:	2	1600	1,172	0.73	C	2	1600	1,021	0.64	B	1,186	0.74	C	1,058	0.66	B	
8	Santa Anita Av.	Valley Bl. to Ramona Bl.																	D
		AM Peak Hour:	3	2400	1,042	0.43	A	3	2400	1,386	0.58	A	1,058	0.44	A	1,388	0.58	A	
		PM Peak Hour:	3	2400	1,366	0.57	A	3	2400	1,069	0.45	A	1,373	0.57	A	1,075	0.45	A	
9	Santa Anita Av.	Ramona Bl. to I-10 Freeway																	E
		AM Peak Hour:	3	2400	1,253	0.52	A	3	2400	1,571	0.65	B	1,265	0.53	A	1,573	0.66	B	
		PM Peak Hour:	3	2400	1,571	0.65	B	3	2400	1,237	0.52	A	1,578	0.66	B	1,243	0.52	A	

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] These maximum roadway capacities have been extracted from the following source: City of El Monte General Plan EIR (Table 5.13-2). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

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6.7 OPENING YEAR CUMULATIVE (2020) RECOMMENDED IMPROVEMENTS

6.7.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

Improvement strategies have been recommended for those intersections identified as deficient under Opening Year Cumulative (2020) traffic conditions. The effectiveness of the proposed recommended improvements is presented in Table 6-3 for Opening Year Cumulative (2020) traffic conditions. Recommended improvements to address deficiencies for Opening Year Cumulative (2020) traffic conditions are described below.

The addition of Project traffic to Opening Year Cumulative (2020) traffic conditions is anticipated to result in an increase to the v/c ratio by 0.01 or more during the AM peak hour at the intersection of Baldwin Avenue and Valley Boulevard. As such, the cumulative impact is considered significant. The recommended improvement at the intersection of Baldwin Avenue and Valley Boulevard is consistent with that recommended in the General Plan Update EIR. The recommendation is to modify Valley Boulevard from Garey Avenue to the eastern City limit to implement a six-lane roadway through restriping. This recommended improvement reduces the impact to less than significant.

The addition of Project traffic is calculated to result in an increase to the v/c ratio by 0.01 or more during the PM peak hour at the intersection of Baldwin Av. & Loftus Dr. The recommendation to alleviate the impact at Baldwin Avenue and Loftus Drive is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane. Worksheets for Opening Year Cumulative (2020) With Project conditions, with improvements, are provided in Appendix 6.5.

As shown in Table 6-3, with the addition of Project traffic and the prohibition of parking and the provision of a westbound right turn lane at the Baldwin Av. & Loftus Dr. intersection, the ICU at the intersection would be reduced to 1.140 in the AM peak hour and 1.311 in the PM peak hour. As previously shown in Table 6-1, without the addition of Project traffic and implementation of the same recommendations, the intersection of Baldwin Av. & Loftus Dr. would have an ICU of 1.152 in the AM peak hour and 1.361 in the PM peak hour. Thus, with implementation of the recommendations (prohibition of parking and restriping to provide a westbound right turn lane at the intersection), the ICU at the intersection of Baldwin Av. & Loftus Dr. would be reduced in comparison to pre-Project traffic conditions indicating that operations at this intersection would be improved as compared to Opening Year Cumulative (2020) Without Project traffic conditions.

Additionally, and as previously noted, when compared to the impacts reported by the General Plan Update EIR's traffic results, the Project would result in a net reduction in the ICU at the intersection of Baldwin Av. & Loftus Dr. This is because the Project's proposed high-cube warehousing use would generate less traffic than the blended trip rate for general light industrial, industrial park, manufacturing, and warehousing uses that was assumed for the Project site in the General Plan Update EIR's traffic analysis. Thus, although improvements are recommended to reduce the v/c at the intersection of Baldwin Av. & Loftus Dr., the improvements are not considered mitigation under CEQA to address a new or more severe impact because the Project's ICU at the intersection of Baldwin Av. & Loftus Dr. would actually be reduced as compared to ICU

reported by the General Plan Update EIR traffic analysis. Although this intersection was not specifically discussed in the General Plan Update EIR, according to the General Plan Update EIR's traffic analysis, the Project's traffic impacts are clearly within the scope of analysis of the General Plan Update EIR and the Project would not result in any new impacts or increase the severity of a previously-identified significant impact as analyzed in the General Plan Update EIR.

Consistent with the recommended improvement in the General Plan Update EIR, eliminating the on-street parking and restriping the northbound approach to accommodate a 3rd northbound through lane would reduce the impact to less than significant at the intersection of Santa Anita Avenue and Lower Azusa Road for Opening Year Cumulative (2020) traffic conditions.

In conjunction with the recommended northbound right turn lane from the General Plan Update EIR, a southbound right turn lane is also necessary at the intersection of Santa Anita Avenue and Valley Boulevard in order to reduce the impact to less than significant for Opening Year Cumulative (2020) traffic conditions.

Lastly, the General Plan Update EIR did not identify any improvement needs for the intersection of Peck Road and Lower Azusa Road. A 2nd northbound left turn lane is necessary in order to reduce the impact to less than significant at the intersection of Peck Road and Lower Azusa Road for Opening Year Cumulative (2020) traffic conditions.

6.7.2 Recommended Improvements to Address Deficiencies on Roadway Segments

As shown on Table 6-2, there are no deficient roadway segments in the study area for Opening Year Cumulative (2020) traffic conditions. As such, no roadway segment improvements have been recommended for Opening Year Cumulative (2020) traffic conditions.

Table 6-3

Intersection Analysis for Opening Year Cumulative (2020) Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												ICU or Delay[2] (v/c or secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
10	Baldwin Av. & Valley Bl.																	
	- Without Improvements	TS	1	2	1	1	2	0	1	2	d	1	2	d	**0.903**	0.882	**E**	D
	- With Improvements[5]	TS	1	2	1	1	2	0	1	**3**	**0**	1	**3**	**0**	0.839	0.827	D	D
11	Baldwin Av. & Loftus Dr.																	
	- Without Improvements	TS	1	2	0	1	1	1	0	2	0	0	1	0	**1.158**	**1.386**	**F**	**F**
	- With Improvements[4]	TS	1	2	0	1	1	1	0	2	0	0	1	**1**	**1.140**	**1.311**	**F**	**F**
22	Santa Anita Av. & Lower Azusa Rd.																	
	- Without Improvements	TS	1	2	1	1	2	d	1	2	0	1	2	0	0.884	**0.935**	D	**E**
	- With Improvements[5]	TS	1	**3**	**0**	1	2	d	1	2	0	1	2	0	0.852	0.889	D	D
23	Santa Anita Av. & Valley Bl.																	
	- Without Improvements	TS	2	3	0	1	3	0	1	2	0	2	2	0	**0.933**	0.760	**E**	C
	- With Improvements	TS	2	3	**1**	1	3	**1**	1	2	0	2	2	0	**0.922**	0.727	**E**	C
27	Peck Rd. & Lower Azusa Rd.																	
	- Without Improvements	TS	1	2	d	1	2	d	1	2	0	1	2	0	**0.992**	**0.903**	**E**	**E**
	- With Improvements	TS	**2**	2	d	1	2	d	1	2	0	1	2	0	**0.915**	0.887	**E**	D

1 When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d= Defacto Right Turn Lane; **1** = Improvement

2 Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for unsignalized all-way stop controlled intersections. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements haring a single lane) are shown. The Intersection Capacity Utilization (ICU) volume-to-capacity ratio has been reported for all signalized intersections.

3 TS = Traffic Signal

4 Recommendation is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane. Improvement will reduce the impact to less than significant levels.

5 Prohibit on-street parking during the peak hours to accommodate the recommended restriping.

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7 HORIZON YEAR (2035) TRAFFIC CONDITIONS

This section discusses the methods used to develop Horizon Year (2035) Without and With Project traffic forecasts, and the resulting intersection operations, roadway segment, and traffic signal warrant analyses.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year (2035) conditions are the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the Project and cumulative development's frontage and driveways). Improvements include construction of site adjacent roadways and intersections needed for site access.
- Driveways and those facilities assumed to be constructed by other development projects to provide site access are also assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the cumulative development's frontage and driveways).

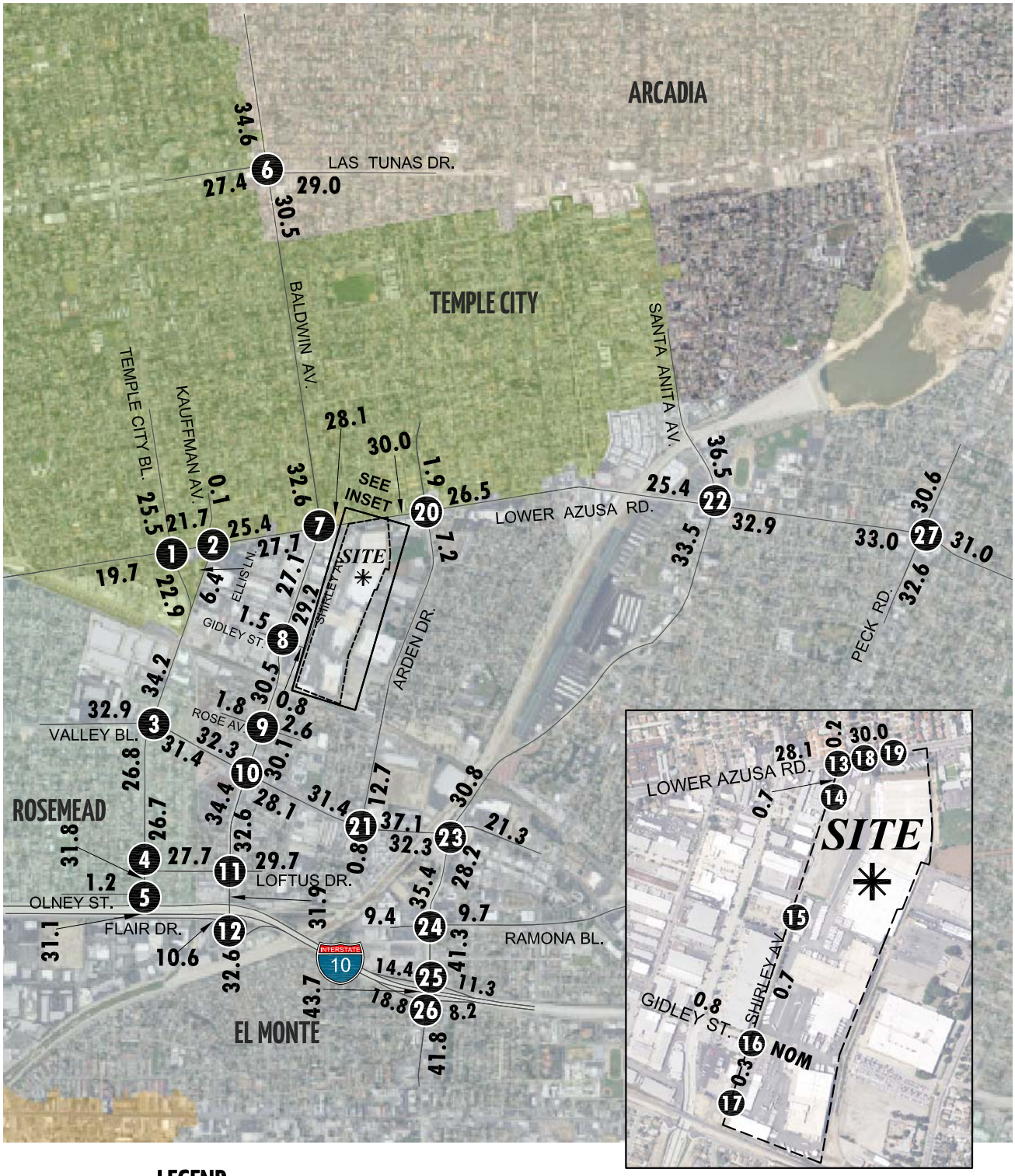
7.2 HORIZON YEAR (2035) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 9.27% plus traffic from pending and approved but not yet constructed known development projects in the area. The ADT and AM and PM peak hour volumes which can be expected for Horizon Year (2035) Without Project traffic conditions are shown on Exhibits 7-1 and 7-2, respectively.

7.3 HORIZON YEAR (2035) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes, an ambient growth factor of 9.27%, traffic from pending and approved but not yet constructed known development projects in the area and the addition of Project traffic. The ADT and AM and PM peak hour volumes which can be expected for Horizon Year (2035) With Project traffic conditions are shown on Exhibits 7-3 and 7-4, respectively.

EXHIBIT 7-1: HORIZON YEAR (2035) WITHOUT PROJECT AVERAGE DAILY TRAFFIC (ADT)



LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

EXHIBIT 7-2: HORIZON YEAR (2035) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)

1 Temple City Bl. & Lower Azusa Rd.
84(64) 689(619) 164(192)
131(110) 735(467) 196(129)
89(109) 422(641) 90(38)
90(96) 723(739) 10(25)

2 Kauffman Av./ Ellis Ln. & Lower Azusa Rd.
7(5)
7(4) 1041(655) 193(92)
538(799) 68(52)
61(40) 198(277)

3 Temple City Bl. & Valley Bl.
328(214) 566(731) 247(256)
261(204) 1013(655) 89(107)
178(276) 647(978) 45(79)
221(170) 864(779) 57(64)

4 Temple City Bl. & Loftus Dr.
449(634) 237(235)
98(104) 367(482)
1017(952) 299(208)

5 Temple City Bl. & Olney St.
78(67) 779(1063)
31(16)
1349(1163)

6 Baldwin Av. & Las Tunas Dr.
96(160) 806(969) 120(207)
291(180) 1172(646) 102(110)
125(137) 456(850) 97(76)
82(101) 1005(840) 79(97)

7 Baldwin Av. & Lower Azusa Rd.
221(169) 847(702) 134(214)
188(129) 934(564) 229(110)
159(251) 453(856) 116(83)
103(70) 651(883) 185(263)

8 Baldwin Av. & Gidley St.
8(4) 1167(947) 6(2)
16(14) 2(0) 13(29)
5(13) 1(2) 27(65)
75(22) 1022(1124) 10(8)

9 Baldwin Av. & Rose Av.
51(32) 1070(937) 59(48)
111(50) 25(12) 28(4)
28(31) 32(26) 41(23)
11(10) 980(1088) 55(43)

10 Baldwin Av. & Valley Bl.
129(138) 848(716) 147(172)
145(148) 1029(738) 201(185)
148(126) 560(979) 219(182)
172(166) 714(869) 197(208)

11 Baldwin Av. & Loftus Dr.
285(169) 935(702) 3(214)
30(129) 78(564) 268(110)
79(251) 29(856) 466(83)
34(70) 861(883) 101(263)

12 Baldwin Av. & Flair Dr./ I-10 EB Ramps
794(182) 940(815)
39(175) 77(382)
41(25) 936(1123)

13 Shirley Av. & Lower Azusa Rd.
1(3) 0(0) 1(0)
2(2) 1385(792) 21(7)
2(7) 767(1337) 21(16)
2(6) 0(0) 9(19)

14 Shirley Av. & Dwy. 1
Future Intersection

15 Shirley Av. & Dwy. 2
Future Intersection

16 Shirley Av. & Gidley St.
16(26) 2(2) 1(0)
0(1) 2(0) 0(0)
3(13) 0(0) 7(5)
30(12) 6(5) 0(0)

17 Shirley Av. & Dwy. 3
Future Intersection

18 Dwy. 4 & Lower Azusa Rd.
Future Intersection

19 Dwy. 5 & Lower Azusa Rd.
Future Intersection

20 Arden Dr. & Lower Azusa Rd.
117(24) 25(26) 27(31)
48(33) 974(982) 10(46)
59(12) 1091(1095) 60(43)
27(3) 32(12) 42(48)

21 Arden Dr. & Valley Bl.
204(123) 3(3) 662(383)
423(278) 1285(873) 6(19)
89(126) 754(1104) 9(16)
5(16) 1(0) 4(11)

22 Santa Anita Av. & Lower Azusa Rd.
91(105) 964(958) 263(361)
300(273) 811(590) 204(175)
115(73) 462(799) 86(92)
140(171) 817(857) 103(175)

23 Santa Anita Av. & Valley Bl.
447(169) 940(638) 47(49)
22(43) 1046(669) 56(91)
202(296) 596(780) 11(13)
447(401) 603(982) 39(61)

24 Santa Anita Av. & Ramona Bl.
72(96) 1330(941) 85(70)
90(67) 85(63) 226(157)
49(109) 58(139) 90(180)
97(89) 941(1265) 282(253)

25 Santa Anita Av. & I-10 WB Ramps
445(405) 1103(882)
392(279) 226(155) 497(378)
273(478) 1006(1406)

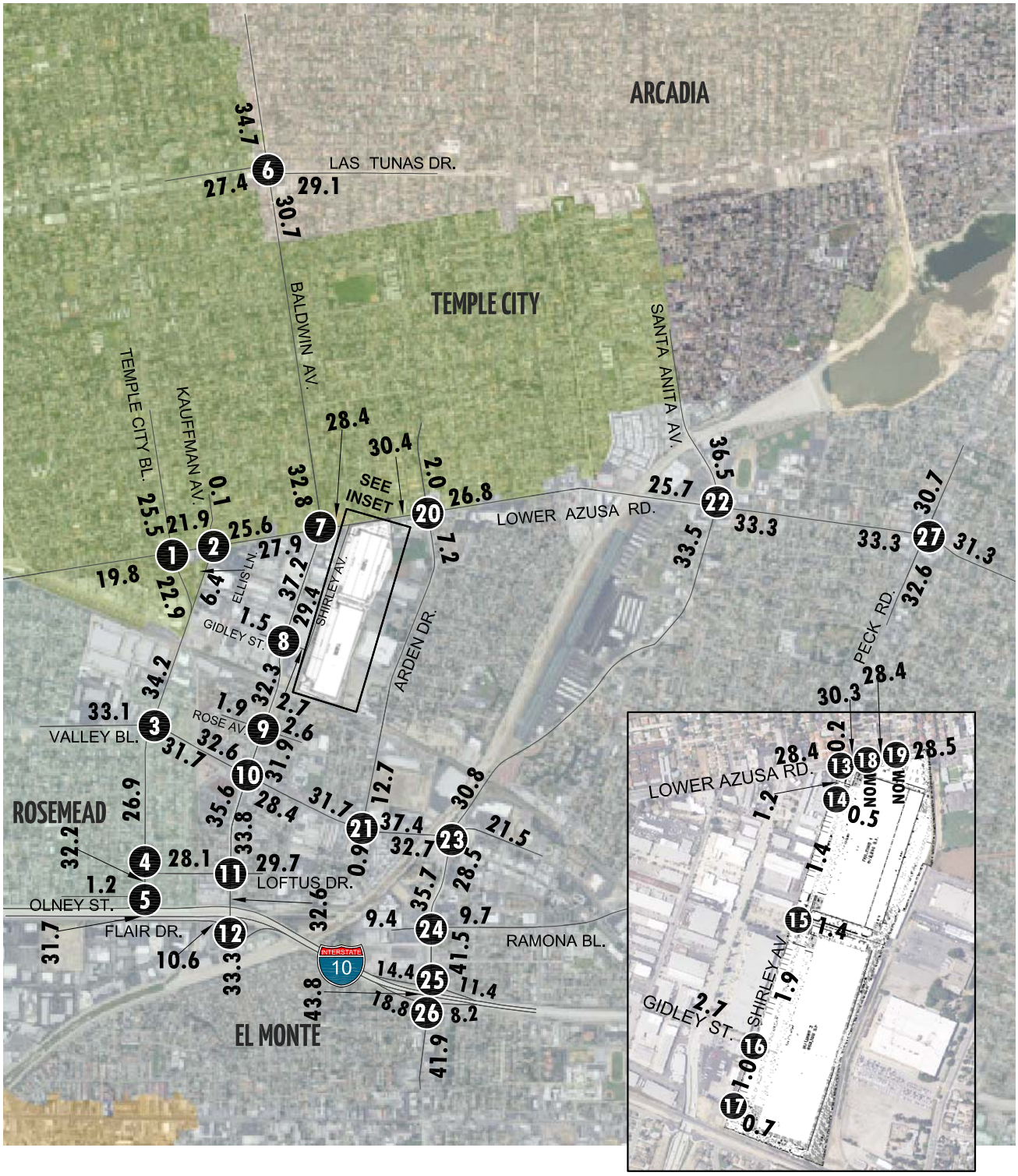
26 Santa Anita Av. & I-10 EB Ramps
1248(1027) 351(233)
409(623) 129(182) 374(547)
870(1261) 341(176)

27 Peck Rd. & Lower Azusa Rd.
237(200) 1109(735) 99(175)
98(77) 930(640) 215(191)
202(182) 513(959) 193(146)
257(249) 866(836) 80(189)

LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

EXHIBIT 7-3: HORIZON YEAR (2035) WITH PROJECT AVERAGE DAILY TRAFFIC (ADT)

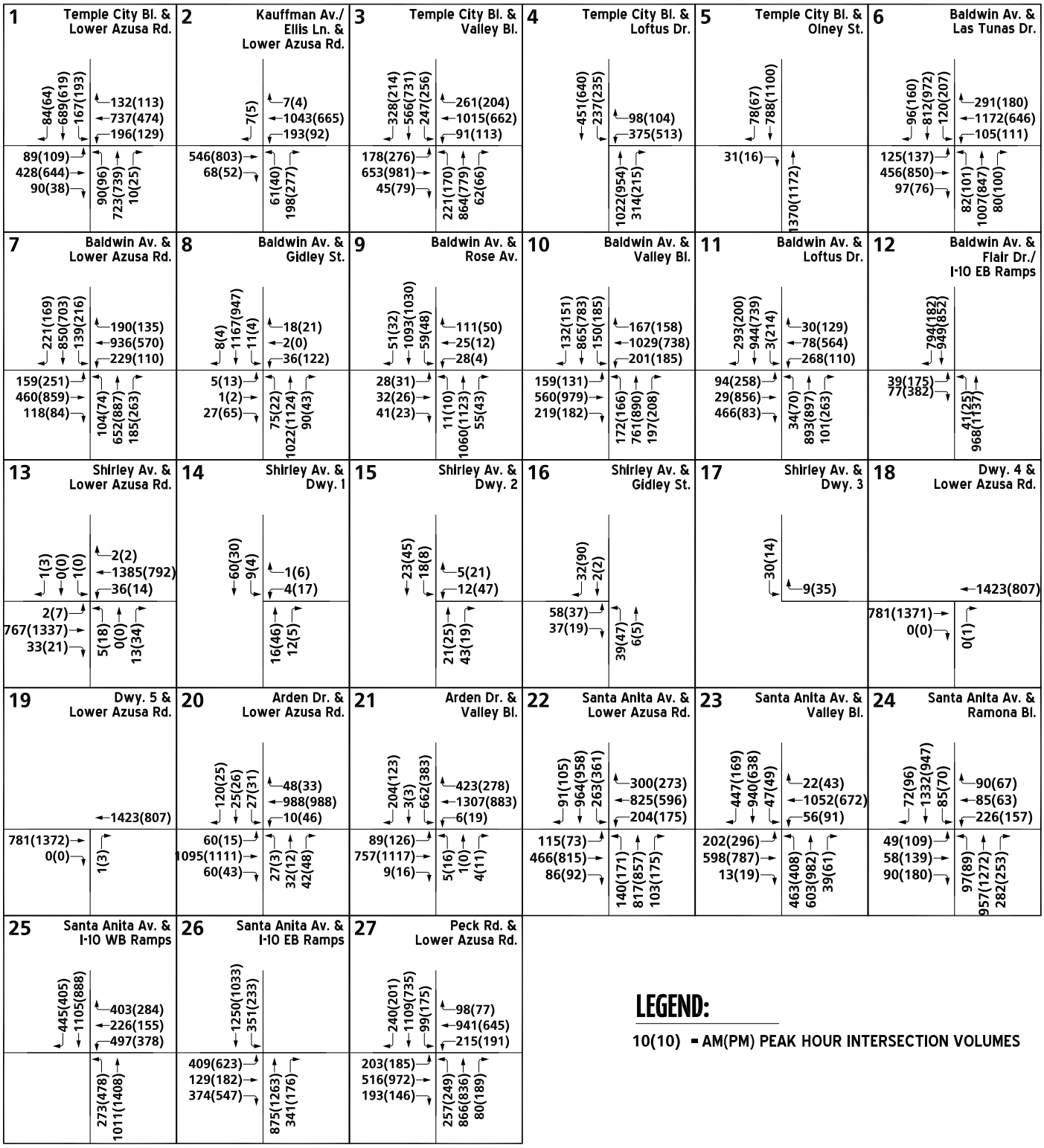


LEGEND:

10.0 = VEHICLES PER DAY (1000'S)

NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

EXHIBIT 7-4: HORIZON YEAR (2035) WITH PROJECT TRAFFIC VOLUMES (IN PCE)



LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES

7.4 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under Horizon Year (2035) Without and With Project conditions with Existing roadway and intersection geometrics consistent with Exhibit 3-1 with the exceptions described previously in Section 7.1 *Roadway Improvements*. The intersection analysis results are summarized in Table 7-1 and illustrated on Exhibit 7-5 which indicates that the following intersections are anticipated to experience unacceptable LOS (i.e., LOS E or worse) during one or more peak hours for Horizon Year Without Project traffic conditions in addition to those previously identified under Opening Year Cumulative (2020) Without Project traffic conditions:

- Ellis Ln. & Lower Azusa Rd. (#2) – LOS E AM peak hour only
- Baldwin Av. & Valley Bl. (#10) – LOS E AM and PM peak hours

As shown on Table 7-1 and illustrated on Exhibit 7-6, the addition of Project traffic is not anticipated to result in any new deficiencies; however, the v/c is anticipated to increase by 0.01 or more at the following intersections, resulting in a significant cumulative impact for Horizon Year (2035) With Project traffic conditions:

- Baldwin Av. & Valley Bl. (#10) – v/c > 0.01 during the AM and PM peak hours
- Baldwin Av. & Loftus Dr. (#11) – v/c > 0.01 or more during the AM and PM peak hours
- Santa Anita Av. & Lower Azusa Rd. (#22) – v/c > 0.01 during the PM peak hour
- Santa Anita Av. & Valley Bl. (#23) – v/c > 0.01 during the AM peak hour

As indicated above, the addition of Project traffic would increase to the v/c ratio by 0.01 or more during the PM peak hour at the intersection of Baldwin Av. & Loftus Dr., which is a significant cumulative impact per the City of El Monte's significance threshold; thus, additional analysis has been conducted to evaluate whether this impact was considered in the General Plan Update EIR's Traffic Study. Table 6-1 compares the ICU at the intersection of Baldwin Av. & Loftus Dr. as reported in the General Plan Update EIR traffic analysis to the ICU that would occur under the proposed Project. As shown, redevelopment of the 55.86-acre Project site with high-cube warehouse uses as proposed by the Project would result in a net reduction in the ICU by between 0.030 and 0.182 as compared to the traffic results in the General Plan Update EIR.

Although the General Plan Update EIR's traffic study did not specifically discuss the intersection of Baldwin Av. & Loftus Dr., the traffic forecasts utilized in the General Plan Update EIR's Traffic Study could be determined for the intersection of Baldwin Av. & Loftus Dr. Additionally, the General Plan Update EIR and its traffic study contained enough information about deficiencies at adjacent intersections that with the exercise of reasonable diligence and/or a review of the General Plan Update EIR traffic forecasts, the traffic impacts resulting from General Plan Buildout to intersections throughout the City, including the intersection of Baldwin Av. & Loftus Dr., was available to the public and part of the General Plan Update EIR public record. Furthermore, and as shown in Table 7-1, the proposed Project would result in less traffic at the intersection of Baldwin Av. & Loftus Dr. as compared to amount of traffic that the General Plan Update EIR assumed would be generated by buildout of the Project site.

Table 7-1

Intersection Analysis for Horizon Year (2035) Conditions

#	Intersection	Traffic Control[3]	2035 Without Project ICU or Delay[2] (v/c or secs.) AM	2035 Without Project ICU or Delay[2] (v/c or secs.) PM	2035 Without Project Level of Service AM	2035 Without Project Level of Service PM	2035 With Project ICU or Delay[2] (v/c or secs.) AM	2035 With Project ICU or Delay[2] (v/c or secs.) PM	2035 With Project Level of Service AM	2035 With Project Level of Service PM	Change in ICU or Delay AM	Change in ICU or Delay PM	Significant Impact?
1	Temple City Bl. & Lower Azusa Rd.	TS	0.758	0.752	C	C	0.761	0.753	C	C	0.003	0.001	No
2	Ellis Ln. & Lower Azusa Rd.	CSS	**39.7**	26.5	**E**	D	**40.3**	26.8	**E**	D	0.6	0.3	No
3	Temple City Bl. & Valley Bl.[4]	TS	0.970	0.896	E	D	0.972	0.903	E	E	0.002	0.007	No
4	Temple City Bl. & Loftus Dr.	TS	0.774	0.760	C	C	0.783	0.772	C	C	0.009	0.012	No
5	Temple City Bl. & Olney St.	CSS	15.6	20.7	C	C	15.7	21.7	C	C	0.1	1.0	No
6	Baldwin Av. & Las Tunas Dr.	TS	0.933	0.850	E	D	0.934	0.853	E	D	0.001	0.003	No
7	Baldwin Av. & Lower Azusa Rd.	TS	0.879	0.883	D	D	0.882	0.889	D	D	0.003	0.006	No
8	Baldwin Av. & Gidley St.	TS	0.550	0.523	A	A	0.566	0.597	A	A	0.016	0.074	No
9	Baldwin Av. & Rose Av.	TS	0.580	0.544	A	A	0.605	0.555	B	A	0.025	0.011	No
10	Baldwin Av. & Valley Bl.	TS	**0.927**	**0.901**	**E**	**E**	**0.940**	**0.915**	**E**	**E**	**0.013**	**0.014**	**Yes**
11	Baldwin Av. & Loftus Dr.	TS	**1.232**	**1.466**	**F**	**F**	**1.238**	**1.482**	**F**	**F**	**0.006**	**0.016**	**Yes**
	General Plan Land Use Mix:	*TS*					***1.268***	***1.664***	***F***	***F***			
12	Baldwin Av. & Flair Dr.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	--[5]	--[5]	No[6]
13	Shirley Av. & Lower Azusa Rd.	CSS	29.4	23.1	D	C	30.4	31.2	D	D	1.0	8.1	No
14	Shirley Av. & Driveway 1	**CSS**	Future Intersection				8.9	9.0	A	A			--
15	Shirley Av. & Driveway 2	**CSS**	Future Intersection				9.0	9.2	A	A			--
16	Shirley Av. & Gidley St.	AWS	7.1	7.0	A	A	7.6	7.4	A	A	0.5	0.4	No
17	Shirley Av. & Driveway 3	**CSS**	Future Intersection				0.0	0.0	A	A			--
18	Driveway 4 & Lower Azusa Rd.	**CSS**	Future Intersection				0.0	15.0	A	C			--
19	Driveway 5 & Lower Azusa Rd.	**CSS**	Future Intersection				11.2	15.1	B	C			--
20	Arden Dr. & Lower Azusa Rd.	TS	0.556	0.534	A	A	0.559	0.539	A	A	0.003	0.005	No
21	Arden Dr. & Valley Bl.	TS	0.771	0.666	C	B	0.778	0.659	C	B	0.007	-0.007	No
22	Santa Anita Av. & Lower Azusa Rd.	TS	**0.939**	**0.981**	**E**	**E**	**0.943**	**0.986**	**E**	**E**	0.004	**0.005**	**Yes**
23	Santa Anita Av. & Valley Bl.	TS	**0.989**	0.801	**E**	D	**0.996**	0.804	**E**	D	**0.007**	0.003	**Yes**
24	Santa Anita Av. & Ramona Bl.	TS	0.629	0.719	B	C	0.630	0.721	B	C	0.001	0.002	No
25	Santa Anita Av. & I-10 WB Ramps	TS	21.2	20.0	C	C	21.3	20.1	C	C	0.1	0.1	No
26	Santa Anita Av. & I-10 EB Ramps	TS	19.3	23.4	B	C	20.9	23.5	C	C	1.6	0.1	No
27	Peck Rd. & Lower Azusa Rd.	TS	**1.055**	**0.950**	**F**	**E**	**1.059**	**0.954**	**F**	**E**	0.004	0.004	No

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d= Defacto Right Turn Lane

[2] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for unsignalized all-way stop controlled intersections. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements haring a single lane) are shown. The Intersection Capacity Utilization (ICU) volume-to-capacity ratio has been reported for all signalized intersections.

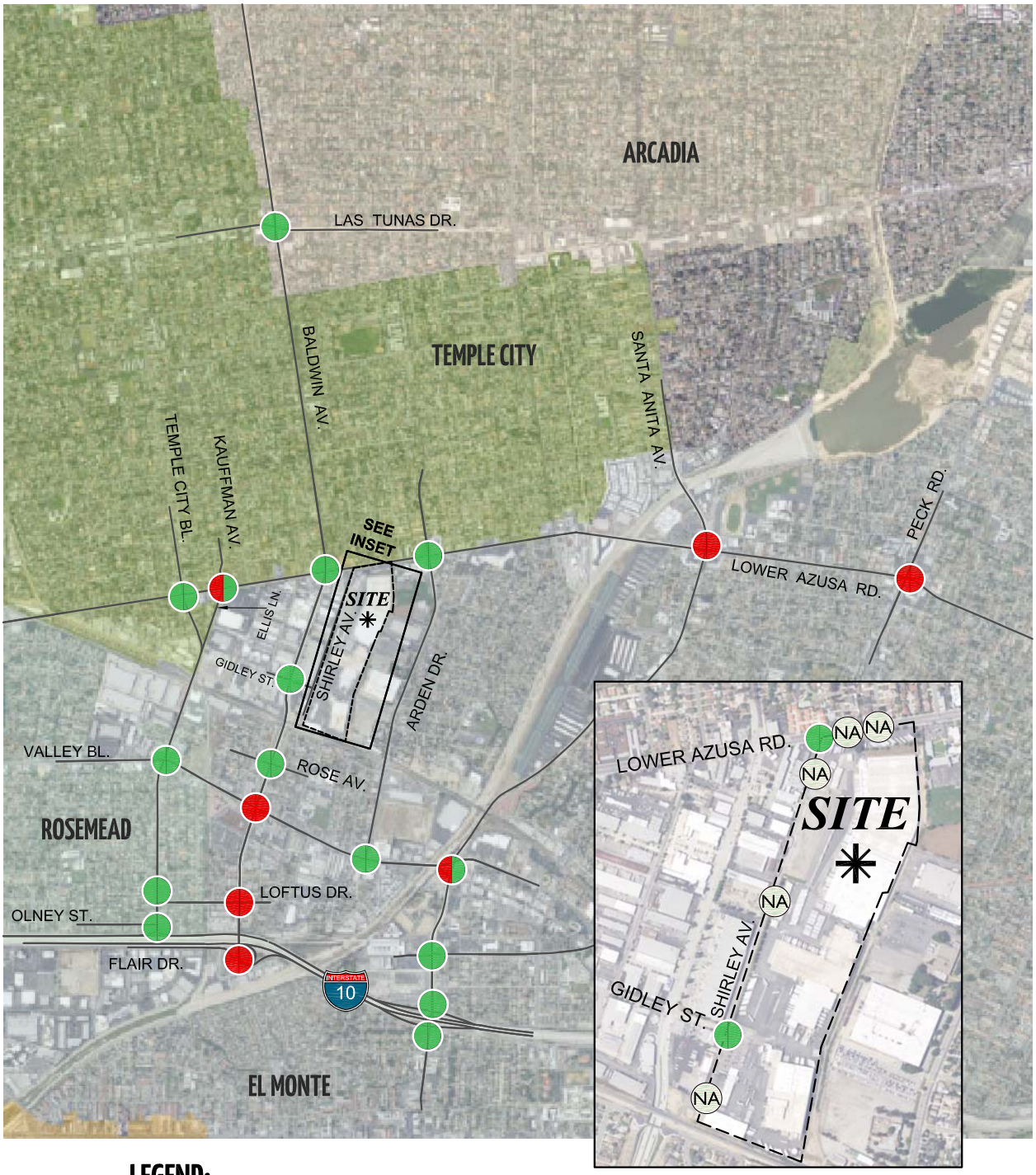
[3] CSS = Cross Street Stop; AWS = All-Way Stop; TS = Traffic Signal; **CSS** = Improvement

[4] Policy CI-1 of the City of Arcadia General Plan Circulation and Infrastructure Element recognizes LOS E as an acceptable LOS at intersections along Baldwin Av.

[5] Change in delay to the side-street (Flair Drive) left turn movement is anticipated to be greater than 2.0 seconds.

[6] The proposed Project is not anticipated to contribute any traffic to the deficient eastbound left turn movement (on Flair Dr.). As such, the impact is anticipated to be less than significant.

EXHIBIT 7-5: HORIZON YEAR (2035) WITHOUT PROJECT SUMMARY OF LOS

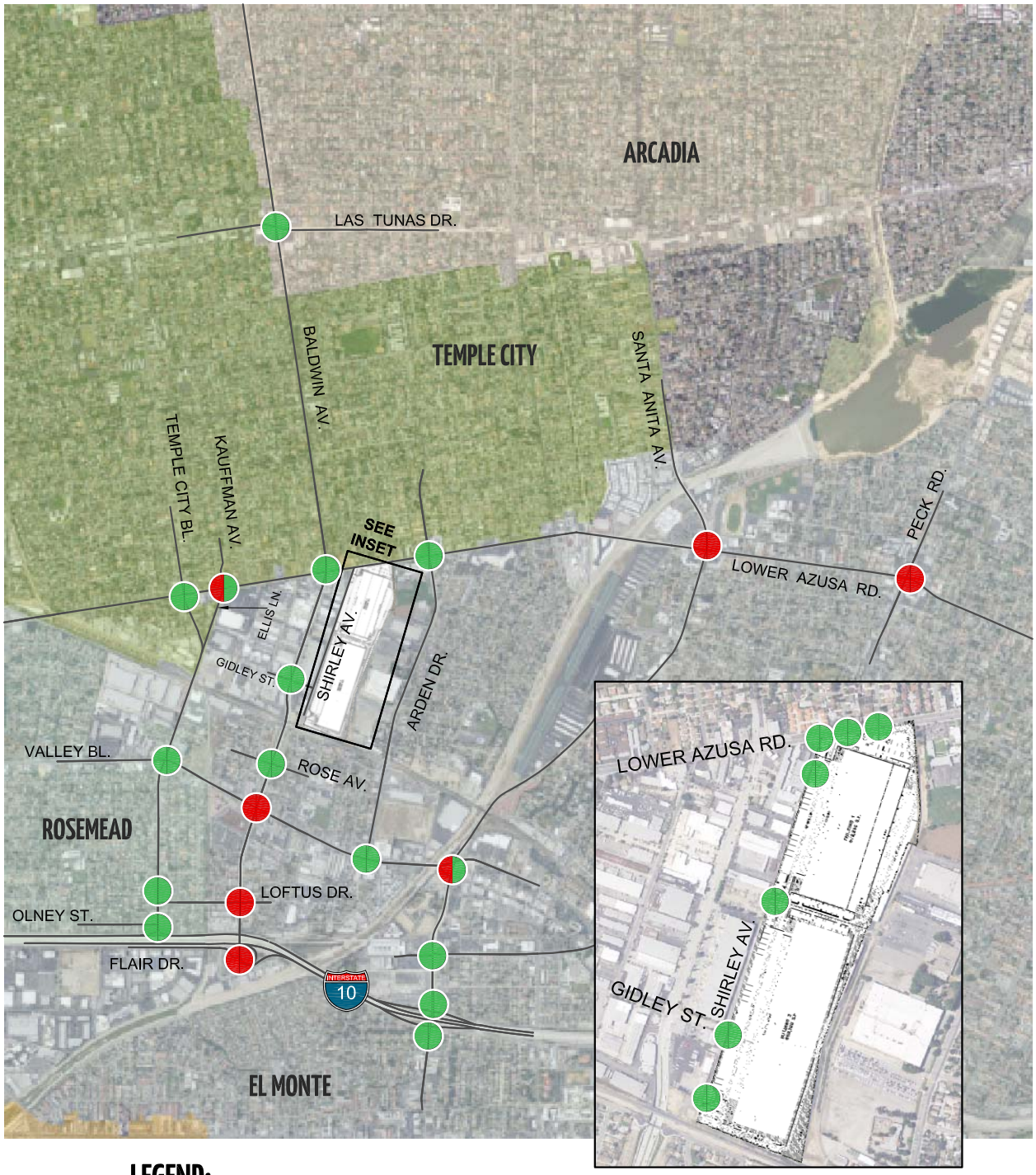


LEGEND:

- = AM PEAK HOUR ACCEPTABLE LOS
- = AM PEAK HOUR DEFICIENT LOS
- = PM PEAK HOUR ACCEPTABLE LOS
- = PM PEAK HOUR DEFICIENT LOS
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

N

EXHIBIT 7-6: HORIZON YEAR (2035) WITH PROJECT SUMMARY OF LOS



LEGEND:

- = AM PEAK HOUR ACCEPTABLE LOS
- = AM PEAK HOUR DEFICIENT LOS
- = PM PEAK HOUR ACCEPTABLE LOS
- = PM PEAK HOUR DEFICIENT LOS

N

11274 - los.dwg

URBAN CROSSROADS

Thus, it can be clearly concluded that the Project's generated traffic volume and cumulative impacts are within the scope of analysis and level of impacts disclosed as part of the General Plan Update EIR public record, and the Project would not result in any new impacts or increase the severity of a previously-identified significant impact as analyzed in the General Plan Update EIR.

The intersection operations analysis worksheets for Horizon Year Without Project conditions are included in Appendix 7.1 of this TIA. The intersection operations analysis worksheets for Horizon Year With Project conditions are included in Appendix 7.2 of this TIA. Measures to address deficiencies for Horizon Year traffic conditions are discussed in Section 7.7 *Horizon Year (2035) Recommended Improvements*.

7.5 ROADWAY SEGMENT CAPACITY ANALYSIS

Table 7-2 provides a summary of the Horizon Year (2035) Without Project traffic conditions roadway segment capacity analysis based on the City of El Monte Roadway Segment Capacity Thresholds in the General Plan Update EIR. The following study area roadway segments are anticipated to operate at an unacceptable LOS for Horizon Year (2035) Without Project traffic conditions:

- Lower Azusa Rd., Santa Anita Av. to Peck Rd. (#3) – LOS F Westbound AM peak hour only
- Baldwin Av., Valley Bl. to I-10 Freeway (#7) – LOS F Southbound AM peak hour only

The roadway segment analysis results indicate that the addition of Project traffic is not anticipated to result in any additional roadway segment deficiencies, in addition to those previously identified under Horizon Year (2035) Without Project traffic conditions based on the City's peak hour planning level roadway capacity thresholds.

7.6 TRAFFIC SIGNAL WARRANTS ANALYSIS

For Horizon Year (2035) traffic conditions, there are no additional study area intersections anticipated to meet either peak hour volume based or planning level ADT traffic signal warrants, in addition to the location previously warranted under Existing (2017) traffic conditions (see Appendix 7.3 and Appendix 7.4).

Table 7-2

Roadway Segment Capacity Analysis for Horizon Year (2035) Conditions

#	Roadway	Segment Limits	Eastbound/Northbound					Westbound/Southbound					Eastbound/Northbound			Westbound/Southbound			Acceptable
			# of Lanes	LOS Capacity[1]	2035 NP	V/C[2]	LOS[3]	# of Lanes	LOS Capacity[1]	2035 NP	V/C[2]	LOS[3]	2035 WP	V/C[2]	LOS[3]	2035 WP	V/C[2]	LOS[3]	LOS
1	Lower Azusa Rd.	Baldwin Av. to Arden Dr.																	E
		AM Peak Hour:	2	1,400	1,211	0.86	D	2	1,400	1,352	0.97	E	1,216	0.87	D	1,369	0.98	E	
		PM Peak Hour:	2	1,400	1,333	0.95	E	2	1,400	1,010	0.72	C	1,352	0.97	E	1,017	0.73	C	
2	Lower Azusa Rd.	Arden Dr. to Santa Anita Av.																	E
		AM Peak Hour:	2	1400	1,162	0.83	D	2	1400	1,045	0.75	C	1,166	0.83	D	1,059	0.76	C	
		PM Peak Hour:	2	1400	1,175	0.84	D	2	1400	1,061	0.76	C	1,191	0.85	D	1,067	0.76	C	
3	Lower Azusa Rd.	Santa Anita Av. to Peck Rd.																	E
		AM Peak Hour:	2	1400	899	0.64	B	2	1400	**1,424**	**1.02**	**F**	903	0.65	B	**1,438**	**1.03**	**F**	
		PM Peak Hour:	2	1400	1,335	0.95	E	2	1400	1,089	0.78	C	1,351	0.97	E	1,095	0.78	C	
4	Valley Bl.	Baldwin Av. to Arden Dr.																	E
		AM Peak Hour:	2	1600	906	0.57	A	2	1600	1,495	0.93	E	909	0.57	A	1,517	0.95	E	
		PM Peak Hour:	2	1600	1,360	0.85	D	2	1600	1,070	0.67	B	1,373	0.86	D	1,080	0.67	B	
5	Valley Bl.	Santa Anita Av. to Tyler Av.																	E
		AM Peak Hour:	2	1600	683	0.43	A	2	1600	1,125	0.70	C	685	0.43	A	1,131	0.71	C	
		PM Peak Hour:	2	1600	891	0.56	A	2	1600	804	0.50	A	898	0.56	A	807	0.50	A	
6	Baldwin Av.	Lower Azusa Rd. to Valley Bl.																	D
		AM Peak Hour:	2	1600	1,007	0.63	B	2	1600	1,193	0.75	C	1,087	0.68	B	1,216	0.76	C	
		PM Peak Hour:	2	1600	1,216	0.76	C	2	1600	1,026	0.64	B	1,252	0.78	C	1,119	0.70	B	
7	Baldwin Av.	Valley Bl. to I-10 Freeway																	E
		AM Peak Hour:	2	1600	997	0.62	B	2	1600	**1,671**	**1.04**	**F**	1,029	0.64	B	**1,680**	**1.05**	**F**	
		PM Peak Hour:	2	1600	1,243	0.78	C	2	1600	1,083	0.68	B	1,257	0.79	C	1,120	0.70	B	
8	Santa Anita Av.	Valley Bl. to Ramona Bl.																	D
		AM Peak Hour:	3	2400	1,089	0.45	A	3	2400	1,488	0.62	B	1,105	0.46	A	1,490	0.62	B	
		PM Peak Hour:	3	2400	1,445	0.60	B	3	2400	1,108	0.46	A	1,452	0.60	B	1,114	0.46	A	
9	Santa Anita Av.	Ramona Bl. to I-10 Freeway																	E
		AM Peak Hour:	3	2400	1,320	0.55	A	3	2400	1,647	0.69	A	1,332	0.55	A	1,649	0.69	B	
		PM Peak Hour:	3	2400	1,608	0.67	B	3	2400	1,280	0.53	A	1,615	0.67	B	1,286	0.54	A	

BOLD = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

[1] These maximum roadway capacities have been extracted from the following source: City of El Monte General Plan EIR (Table 5.13-2). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

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7.7 HORIZON YEAR (2035) RECOMMENDED IMPROVEMENTS

7.7.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

Improvement strategies have been recommended for those intersections identified as deficient under Horizon Year (2035) traffic conditions. The effectiveness of the proposed recommended improvements is presented in Table 7-3 for Horizon Year (2035) traffic conditions. Recommended improvements to address deficiencies for Horizon Year (2035) traffic conditions are described below.

The addition of Project traffic to Horizon Year (2035) traffic conditions is anticipated to result in an increase to the v/c ratio by 0.01 or more during the AM and PM peak hours at the intersection of Baldwin Avenue and Valley Boulevard. As such, the cumulative impact is considered significant. The recommended improvement at the intersection of Baldwin Avenue and Valley Boulevard is consistent with that recommended in the General Plan Update EIR. The recommendation is to modify Valley Boulevard from Garey Avenue to the eastern City limit to implement a six-lane roadway through restriping. This recommended improvement reduces the impact to less than significant.

The addition of Project traffic is calculated to result in an increase to the v/c ratio by 0.01 or more during the PM peak hour at the intersection of Baldwin Av. & Loftus Dr. The recommendation to alleviate the impact at Baldwin Avenue and Loftus Drive is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane. Worksheets for Horizon Year (2035) With Project conditions, with improvements, are provided in Appendix 7.5.

As shown in Table 7-3, with the addition of Project traffic and the prohibition of parking and the provision of a westbound right turn lane at the Baldwin Av. & Loftus Dr. intersection, the ICU at the intersection would be reduced to 1.219 in the AM peak hour and 1.401 in the PM peak hour. As previously shown in Table 7-1, without the addition of Project traffic and implementation of the same recommendations, the intersection of Baldwin Av. & Loftus Dr. would have an ICU of 1.232 in the AM peak hour and 1.466 in the PM peak hour. Thus, with implementation of the recommendations (prohibition of parking and restriping to provide a westbound right turn lane at the intersection), the ICU at the intersection of Baldwin Av. & Loftus Dr. would be reduced in comparison to pre-Project traffic conditions indicating that operations at this intersection would be improved as compared to Horizon Year (2035) Without Project traffic conditions.

Additionally, and as previously noted, when compared to the impacts reported by the General Plan Update EIR's traffic results, the Project would result in a net reduction in the ICU at the intersection of Baldwin Av. & Loftus Dr. This is because the Project's proposed high-cube warehousing use would generate less traffic than the blended trip rate for general light industrial, industrial park, manufacturing, and warehousing uses that was assumed for the Project site in the General Plan Update EIR's traffic analysis. Thus, although improvements are recommended to reduce the v/c at the intersection of Baldwin Av. & Loftus Dr., the improvements are not considered mitigation under CEQA to address a new or more severe impact because the Project's ICU at the intersection of Baldwin Av. & Loftus Dr. would actually be reduced as compared to ICU reported by the General Plan Update EIR traffic analysis. Although this intersection was not

specifically discussed in the General Plan Update EIR, according to the General Plan Update EIR's traffic analysis, the Project's traffic impacts are clearly within the scope of analysis of the General Plan Update EIR and the Project would not result in any new impacts or increase the severity of a previously-identified significant impact as analyzed in the General Plan Update EIR.

Consistent with the recommended improvement in the General Plan Update EIR, eliminating the on-street parking and restriping the northbound approach to accommodate a 3rd northbound through lane would reduce the impact to less than significant at the intersection of Santa Anita Avenue and Lower Azusa Road for Horizon Year (2035) traffic conditions.

In conjunction with the recommended northbound right turn lane from the General Plan Update EIR, a southbound right turn lane is also necessary at the intersection of Santa Anita Avenue and Valley Boulevard in order to reduce the impact to less than significant for Horizon Year (2035) traffic conditions.

7.7.2 Recommended Improvements to Address Deficiencies on Roadway Segments

As shown previously on Table 7-2, there are two impacted study area roadway segments. The segment of Lower Azusa Road between Santa Anita Avenue to Peck Road is deficient starting with Existing (2017) traffic conditions in the General Plan Update EIR, but is anticipated to be deficient for Horizon Year (2035) traffic conditions only based on the analysis in this TIA. However, there is no additional right-of-way and restriping is not anticipated to improve the roadway capacity. As such, the General Plan Update EIR identified the impact would remain significant and unavoidable. As such, this TIA also identifies the same deficiency for Horizon Year (2035) traffic conditions, however, no improvements have been recommended for this segment as it has been determined there are no feasible improvements.

The recommended improvement along the segment of Baldwin Avenue between Valley Boulevard and the I-10 Freeway is consistent with that recommended in the General Plan Update EIR (see Table 7-4). The recommendation is to improve the roadway segment with 3 southbound lanes and 2 northbound lanes for a 5-lane section south of Valley Boulevard. The same roadway segment improvement is needed for Horizon Year (2035) traffic conditions only. Although the General Plan Update EIR did not identify a deficiency along this roadway segment for Horizon Year (2035) traffic conditions, this is because the General Plan Update EIR assumed this roadway segment would be improved to a Major Arterial, consistent with the recommendations provided herein to address Project impacts.

Table 7-3

Intersection Analysis for Horizon Year (2035) Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												ICU or Delay[2] (v/c or secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
10	Baldwin Av. & Valley Bl.																	
	- Without Improvements	TS	1	2	1	1	2	0	1	2	d	1	2	d	0.940	0.915	E	E
	- With Improvements[5]	TS	1	2	1	1	2	0	1	**3**	**0**	1	**3**	**0**	0.868	0.851	D	D
11	Baldwin Av. & Loftus Dr.																	
	- Without Improvements	TS	1	2	0	1	1	1	0	2	0	0	1	0	**1.238**	**1.482**	**F**	**F**
	- With Improvements[4]	TS	1	2	0	1	1	1	0	2	0	0	1	**1**	**1.219**	**1.401**	**F**	**F**
22	Santa Anita Av. & Lower Azusa Rd.																	
	- Without Improvements	TS	2	3	0	1	3	0	1	2	0	2	2	0	**0.943**	**0.986**	**E**	**E**
	- With Improvements	TS	2	3	**1**	1	3	**1**	1	2	0	2	2	0	**0.912**	**0.933**	**E**	**E**
23	Santa Anita Av. & Valley Bl.																	
	- Without Improvements	TS	1	2	d	1	2	d	1	2	0	1	2	0	**0.996**	0.804	**E**	D
	- With Improvements	TS	**2**	**3**	**1**	1	2	d	1	2	0	1	2	0	**0.986**	0.769	**E**	C

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; > = Right-Turn Overlap Phasing; d= Defacto Right Turn Lane; **1** = Improvement

[2] Per the 2010 Highway Capacity Manual, overall average intersection delay and level of service are shown for unsignalized all-way stop controlled intersections. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements haring a single lane) are shown. The Intersection Capacity Utilization (ICU) volume-to-capacity ratio has been reported for all signalized intersections.

[3] TS = Traffic Signal

[4] Recommendation is to prohibit on-street parking at the intersection in order to restripe and accommodate a westbound right turn lane. Improvement will reduce the impact to less than significant levels.

[5] Prohibit on-street parking during the peak hours to accommodate the recommended restriping.

Table 7-4

Roadway Segment Capacity Analysis for Horizon Year (2035) Conditions With Improvements

#	Roadway	Segment Limits	Eastbound/Northbound					Westbound/Southbound					Acceptable
			# of Lanes	LOS Capacity[1]	2035 WP	V/C[2]	LOS[3]	# of Lanes	LOS Capacity[1]	2035 WP	V/C[2]	LOS[3]	LOS
7	Baldwin Av.	Valley Bl. to I-10 Freeway											E
		AM Peak Hour:	2	1600	1,029	0.64	B	**3**	2400	1,680	0.70	B	
		PM Peak Hour:	2	1600	1,257	0.79	C	**3**	2400	1,120	0.47	A	

3 = Recommended improvement

[1] These maximum roadway capacities have been extracted from the following source: City of El Monte General Plan EIR (Table 5.13-2). These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS E service volumes are estimated maximum daily capacity for respective classifications. By using the LOS E capacity for each roadway facility type, volume-to-capacity (v/c) values between 0.00-0.60 will represent LOS A, 0.61-0.70 will represent LOS B, 0.71-0.80 will represent LOS C, 0.81-0.90 will represent LOS D, 0.91-1.00 will represent LOS E, and v/c values greater than 1.00 will represent LOS F operations. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] v/c = Volume to Capacity ratio

[3] LOS = Level of Service

8 REFERENCES

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