WOODCREST RETAIL CENTER (CUP250008, CZ2500020)

TRAFFIC ANALYSIS

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CMP	Congestion Management Program
DIF	Development Impact Fee
EAP	Existing plus Ambient Growth plus Project
EAPC	Existing plus Ambient Growth plus Project plus Cumulative
HCM	Highway Capacity Manual
HY	Horizon Year
ITE	Institute of Transportation Engineers
LOS	Level of Service
NCHRP	National Cooperative Highway Research Program
NP	No (Without) Project
PHF	Peak Hour Factor
Project	Woodcrest Retail Center
RCTC	Riverside County Transportation Commission
RTA	Riverside Transit Agency
TA	Traffic Analysis
V/C	Volume-to-Capacity Ratio
vphgpl	Vehicles per Hour Green per Lane
WP	With Project
WRCOG	Western Riverside Council of Governments

1 SUMMARY OF FINDINGS

This report presents the results of the Traffic Analysis (TA) for the Woodcrest Retail Center (**Project**), which is located on the northwest corner of Washington Street and Van Buren Boulevard in the Lake Matthews/Woodcrest area in the County of Riverside, as shown in Exhibit 1-1.

The purpose of this TA is to evaluate the potential circulation system deficiencies that may result when the Project is developed and where circulation system (intersection and/or roadway) improvements are needed to maintain acceptable levels of service consistent with General Plan level of service goals and policies. This traffic study has been prepared in accordance with the County of Riverside's Transportation Analysis Guidelines for Level of Service Vehicle Miles Traveled (County Guidelines, dated December 2020), and consultation with County staff during the traffic study scoping process. (1) The TA Scoping Agreement is included in Appendix 1.1 and has been reviewed and approved by the County of Riverside. The TA Scoping Agreement was also reviewed and approved by the City of Riverside.

EXHIBIT 1-1 : LOCATION MAP



1.1 PROJECT OVERVIEW

1.1.1 Land Use

The site is largely undeveloped/vacant, however, there are two parcels developed with existing uses. Assessor's Parcel Number (APN) 273-141-004 is currently developed with in-line shops and a 7-Eleven with Gas Station. The 7-Eleven is approximately 2,400 square feet (with four vehicle fueling positions), the existing bike store is 2,400 square feet, the smoke shop is 1,200 square feet, the nail shop is 1,200 square feet, and the fish taco shop is 1,200 square feet. All existing structures on this parcel will be demolished and redeveloped as part of the Project. APN 273-141-005 is an existing Farmer Boys fast food restaurant that is approximately 2,640 square feet. This pad will be redeveloped as a 3,390 square foot restaurant pad with drive-through window. There is an existing bank (Valley Bank) located on APN 273-141-008) and is not part of this project and may be redeveloped by others under a future application.

The Project Site Plan Development Concept is presented in Exhibit 1-2. The Project proposes a Base Development Concept, and a "Parcel 1 Option" development concept. Under the Base Development Concept, Parcel 1 would be developed with a convenience store/retail gas station. Under the Parcel 1 Option, it would be developed with retail/restaurant uses. Under either development concept, the remainder of the Project site (Parcels 2 – 6) would be developed with a supermarket, shops, and restaurant uses. Access is the same for both plans.

Access to the Project site will be accommodated via the following driveways:

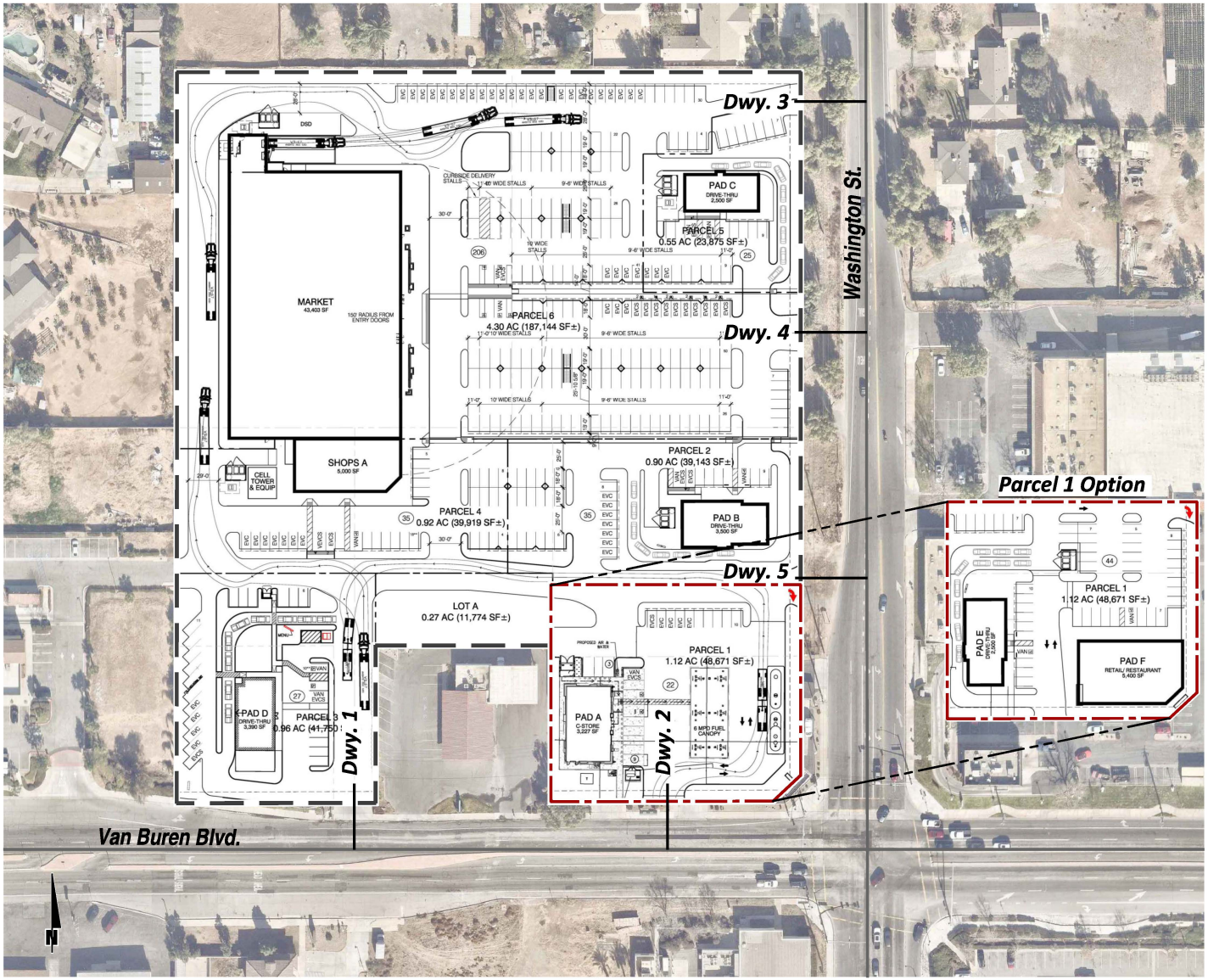
- Driveway 1 on Van Buren Boulevard – right-in/right-out access only
- Driveway 2 on Van Buren Boulevard – right-in/right-out access only
- Driveway 3 on Washington Street – full access
- Driveway 4 on Washington Street – full access (to align with existing center to the east)
- Driveway 5 on Washington Street – right-in/right-out access only

The TA will evaluate Project land uses that would result in likely maximum impacts. Generally, uses that generate the greatest traffic volumes tend to have the greatest potential environmental impacts. This is because, all other factors being equal, development-related traffic volumes correlate directly with transportation deficiencies, vehicular-source criteria pollutants and greenhouse gases, and vehicular-source noise. All of these impacts are further increased under congested traffic conditions. For the purposes of analysis, the assumed Project Opening Year is 2027.

1.1.2 Trip Generation

In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) were used to estimate the trip generation. (2) The Base Development Concept is anticipated to generate 2,910 two-way trips per day with 278 AM peak hour trips and 277 PM peak hour trips. The Parcel 1 Option is anticipated to generate 3,160 two-way trip-ends per day with 471 AM peak hour trips and 289 PM peak hour trips. For the purposes of the study, the Parcel 1 Option was evaluated since it is anticipated to generate higher traffic volumes than the Base Development Concept. 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*.

EXHIBIT 1-2 : PRELIMINARY SITE PLAN



1.2 ANALYSIS SCENARIOS

For the purposes of this TA, peak hour intersection operations have been evaluated for each of the following traffic conditions:

- Existing (2025) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2027) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2027) Conditions
- Horizon Year (2045) Without Project Conditions
- Horizon Year (2045) With Project Conditions

1.2.1 Existing (2025) Conditions

Traffic counts were conducted on May 8, 2025, (Thursday) when local schools were in session and operating under normal bell schedules. Information for Existing (2025) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

1.2.2 EAP (2027) Conditions

The EAP (2027) traffic conditions analysis determines any significant traffic operation and circulation system deficiencies based on a comparison of the EAP traffic conditions to Existing conditions. The roadway network is similar to Existing conditions except for new connections to be constructed by the Project. To account for background traffic growth, an ambient growth factor from Existing (2025) conditions of 4.04% (2 percent per year, compounded over 2 years) is included for EAP (2027) traffic conditions. The assumed ambient growth factor is based on the requirements per the County of Riverside traffic study guidelines. Consistent with Riverside County traffic study guidelines, the EAP analysis is intended to identify "Opening Year" deficiencies associated with the development of the proposed Project based on the expected background growth within the study area.

1.2.3 EAPC (2027) Conditions

The EAPC (2027) traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. The roadway network is similar to Existing conditions except for new connections to be constructed by the Project. To account for background traffic growth, an ambient growth factor from Existing (2025) conditions of 4.04% (2 percent per year, compounded over 2 years) is included for EAPC (2027) traffic conditions.

Conservatively, this TA estimates the area ambient traffic growth and then adds traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed ambient growth rates; and some of these related projects may not be implemented and operational within the 2027 Opening Year time frame assumed for the Project. The resulting traffic growth utilized in this traffic study (ambient growth factor plus traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2027 conditions.

1.2.4 Horizon Year (2045) Conditions

Traffic projections for Horizon Year (2045) conditions were derived from the County of Riverside refined version of the Riverside County Transportation Model (RIVCOM) using accepted procedures

for model forecast refinement and smoothing. The Horizon Year conditions analysis has been utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) program, can accommodate the long-range cumulative traffic at the target Level of Service (LOS) identified in the County of Riverside (lead agency) General Plan. (3) Each of these regional transportation fee programs are discussed in more detail in Section 8 *Local and Regional Funding Mechanisms*.

1.3 STUDY AREA

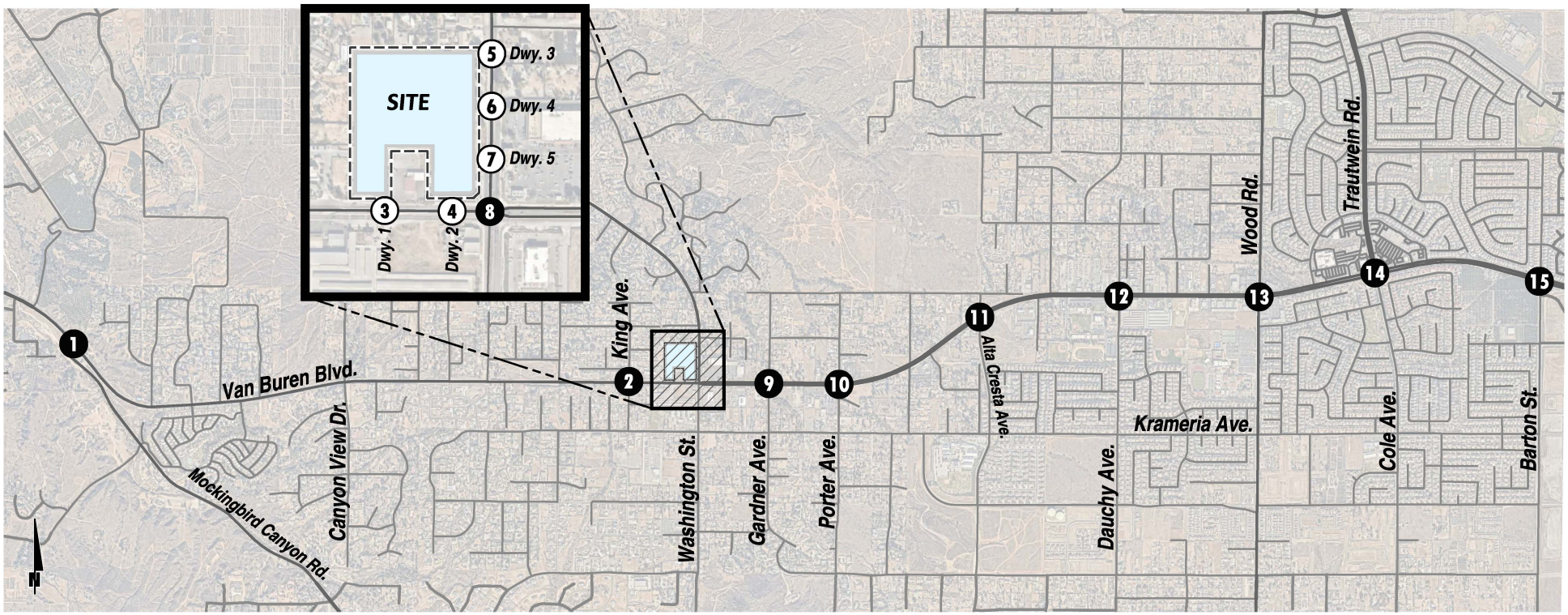
To ensure that this TA satisfies the County of Riverside's traffic study requirements, Urban Crossroads, Inc. prepared a Project traffic study scoping package for review by County of Riverside staff prior to the preparation of this report. This agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology. The scoping agreement is included in Appendix 1.1.

The 15 study area intersections shown in Exhibit 1-3 and listed in Table 1-1 were selected for evaluation in this TA based on consultation with County of Riverside staff. At a minimum, the study area includes intersections where the Project is anticipated to contribute 50 or more peak hour trips per the County's Guidelines. The "50 peak hour trip" criterion represents a minimum number of trips at which a typical intersection would have the potential to be affected by a given development proposal. The 50 peak hour trip criterion is a traffic engineering rule of thumb that is accepted and widely used within the County for estimating a potential area of influence (i.e., study area). The study area also includes additional locations requested by the City of Riverside during scoping.

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

#	Intersection	Jurisdiction	CMP Location?
1	Van Buren Bl. & Mockingbird Canyon Rd.	County of Riverside	No
2	King Av. & Van Buren Bl.	County of Riverside	No
3	Driveway 1 & Van Buren Bl.	County of Riverside	No
4	Driveway 2 & Van Buren Bl.	County of Riverside	No
5	Washington St. & Driveway 3	County of Riverside	No
6	Washington St. & Driveway 4	County of Riverside	No
7	Washington St. & Driveway 5	County of Riverside	No
8	Washington St. & Van Buren Bl.	County of Riverside	No
9	Gardner Av. & Van Buren Bl.	County of Riverside	No
10	Porter Av. & Van Buren Bl.	County of Riverside	No
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	County of Riverside, Riverside	No
12	Dauchy Av. & Van Buren Bl.	Riverside	No
13	Wood Rd. & Van Buren Bl.	Riverside	No
14	Trautwein Rd./Cole Av. & Van Buren Bl.	Riverside	No
15	Barton St. & Van Buren Bl.	Riverside	No

EXHIBIT 1-3 : STUDY AREA



LEGEND:

0 = *Existing Intersection Analysis Location*

0 = *Future Intersection Analysis Location*

1.4 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 3 *Area Conditions*, Section 5 *EAP (2027) Traffic* Conditions, Section 6 *EAPC (2027) Traffic Conditions*, and Section 7 *Horizon Year (2045) Traffic Conditions* includes detailed analysis. A summary of LOS results for all analysis scenarios is presented in Table 1-2.

1.4.1 Existing (2025) Conditions

The following study area intersections are currently operating at an unacceptable LOS during the AM and PM peak hours under Existing conditions:

- Washington Street & Driveway 4 (#6) – LOS E AM peak hour, LOS F PM peak hour
- Gardner Avenue & Van Buren Boulevard (#9) – LOS F AM and PM peak hours

1.4.2 EAP (2027) Conditions

The following study area intersections are anticipated to operate at an unacceptable LOS during the AM and PM peak hours under EAP traffic conditions:

- Gardner Avenue & Van Buren Boulevard (#9) – LOS F AM and PM peak hours
- Wood Road & Van Buren Boulevard (#13) – LOS D AM and PM peak hours
- Barton St. & Van Buren Boulevard (#15) – LOS D AM and PM peak hours

With the implementation of the traffic signal at Washington Street & Driveway 4 (#6) as a Project design feature, the intersection is anticipated to operate at an acceptable LOS during AM and PM peak hours under EAP (2027) traffic conditions.

1.4.3 EAPC (2027) Conditions

The following study area intersections are anticipated to operate at an unacceptable LOS under EAPC traffic conditions:

- Washington Street & Van Buren Boulevard (#8) – LOS E AM and PM peak hours
- Gardner Avenue & Van Buren Boulevard (#9) – LOS F AM and PM peak hours
- Chicago Avenue / Alta Cresta Avenue & Van Buren Boulevard (#11) – LOS E AM peak hour only
- Dauchy Avenue & Van Buren Boulevard (#12) – LOS E AM peak hour only
- Wood Road & Van Buren Boulevard (#13) – LOS F AM peak hour only

1.4.4 Horizon Year (2045) Conditions

The following study area intersections are anticipated to operate at an unacceptable LOS under Horizon Year (2045) Without Project traffic conditions:

- King Avenue & Van Buren Boulevard (#2) – LOS F AM peak hour only
- Washington Street & Driveway 4 (#6) – LOS F AM and PM peak hours
- Washington Street & Van Buren Boulevard (#8) – LOS F AM and PM peak hours
- Gardner Avenue & Van Buren Boulevard (#9) – LOS F AM and PM peak hours
- Chicago Avenue / Alta Cresta Avenue & Van Buren Boulevard (#11) – LOS F AM peak hour only
- Dauchy Avenue & Van Buren Boulevard (#12) – LOS E AM and PM peak hours

- Wood Road & Van Buren Boulevard (#13) – LOS F AM peak hour; LOS E PM peak hour
- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14) – LOS E AM peak hour only
- Barton Street & Van Buren Boulevard (#15) – LOS F AM and PM peak hours

With the implementation of the traffic signal at Washington Street & Driveway 4 (#6) as a Project design feature, the intersection is anticipated to operate at an acceptable LOS during AM and PM peak hours under Horizon Year (2045) With Project traffic conditions.

With the addition of Project traffic, no additional study area intersections are anticipated to operate at an unacceptable LOS under Horizon Year (2045) With Project traffic conditions.

1.5 RECOMMENDATIONS

1.5.1 Site Adjacent and Site Access Recommendations

The following recommendations are based on the minimum improvements needed to accommodate site access and maintain acceptable peak hour operations for the proposed Project. The site adjacent recommendations are shown in Exhibit 1-4.

Recommendation 1 – Driveway 1 & Van Buren Boulevard (#3) - The following improvements are necessary to accommodate site access:

- Project to install a stop control on the southbound approach and construct a right turn lane (Project driveway).
- Project to maintain the existing westbound shared through-right turn lane for ingress traffic.

Recommendation 2 – Driveway 2 & Van Buren Boulevard (#4) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the southbound approach and construct a right turn lane (Project driveway).
- Project to maintain the existing westbound shared through-right turn lane for ingress traffic.

Recommendation 3 – Washington Street & Driveway 3 (#5) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the eastbound approach and construct a shared left-right turn lane (Project driveway).
- Project to maintain the existing northbound shared left-through turn lane for ingress traffic.
- Project to maintain the existing southbound shared through-right turn lane for ingress traffic.

Recommendation 4 – Washington Street & Driveway 4 (#6) – The following improvements are necessary to accommodate site access:

- Project to install a traffic signal.
- Project to construct an eastbound shared left-through-right turn lane (Project driveway).
- Project to construct a northbound left turn lane with a storage length of 170 feet, and a right turn lane with a storage length of 415 feet. Project to maintain the existing northbound through lane.
- Project to construct a southbound shared left-through turn lane and a shared through-right turn lane. Project to maintain the existing southbound through lane.

Recommendation 5 – Washington Street & Driveway 5 (#7) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the eastbound approach and construct a right turn lane (Project driveway).
- Project to construct a southbound right turn lane for ingress traffic.

Recommendation 6 – Washington Street & Van Buren Boulevard (#8) – The following improvements are necessary to accommodate site access:

- Project to modify the existing southbound dual left turn lanes such that the inside left turn lane accommodates a storage length of 180 feet, and the outside left turn lane accommodates a storage length of 415 feet.
- Project to construct a southbound right turn lane with a storage length of 190 feet.

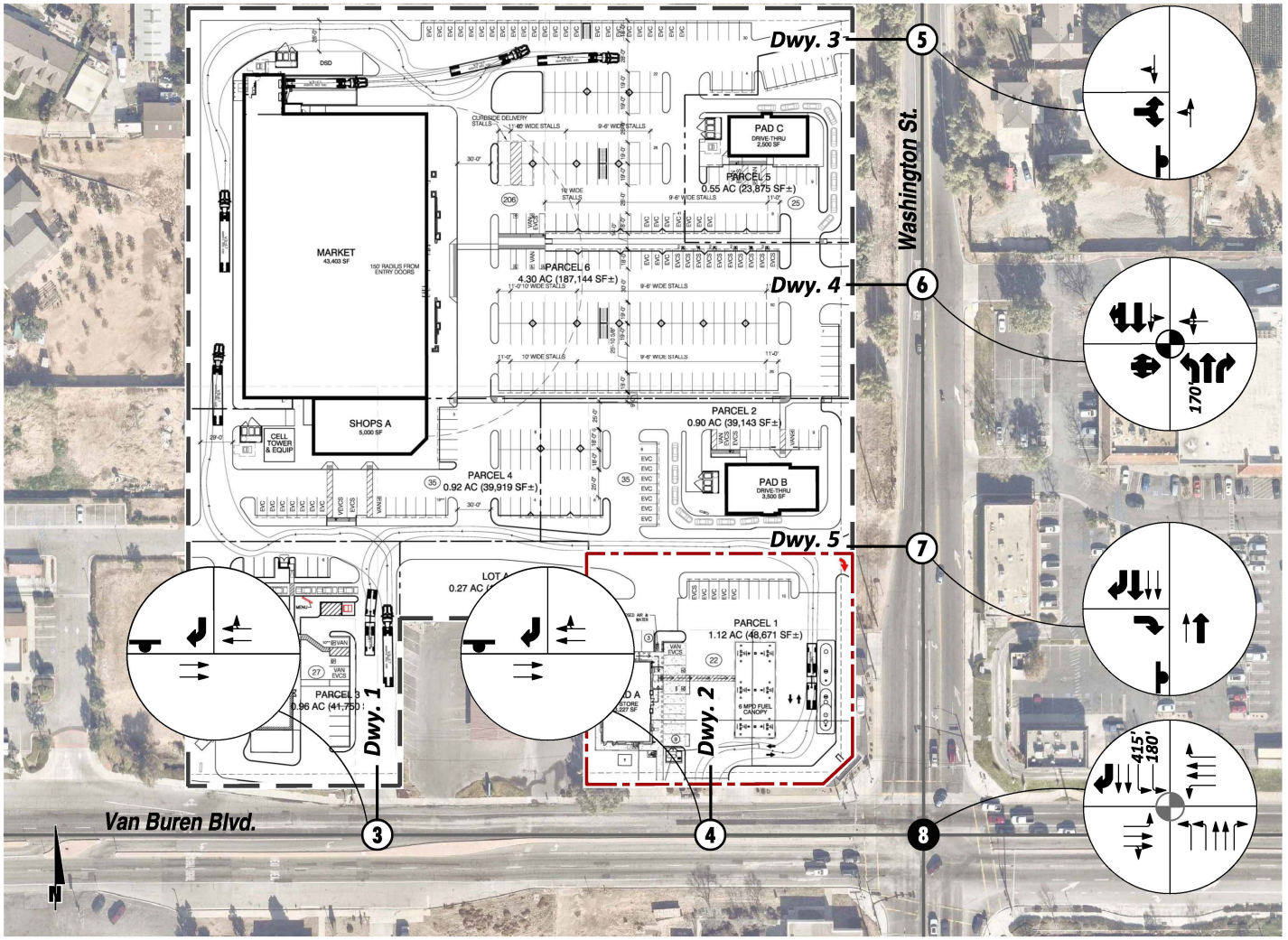
TABLE 1-2 : SUMMARY OF LOS

		Existing	EAP (2027)	EAPC (2027)	HY (2050) NP	HY (2050) WP
1	Van Buren Bl. & Mockingbird Canyon Rd.	A-D	A-D	A-D	A-D	A-D
2	King Av. & Van Buren Bl.	A-D	A-D	A-D	F / A-D	F / A-D
3	Driveway 1 & Van Buren Bl.	N/A	A-D	A-D	N/A	A-D
4	Driveway 2 & Van Buren Bl.	N/A	A-D	A-D	N/A	A-D
5	Washington St. & Driveway 3	N/A	A-D	A-D	N/A	A-D
6	Washington St. & Driveway 4	E / F	A-D	A-D	F	A-D
7	Washington St. & Driveway 5	N/A	A-D	A-D	N/A	A-D
8	Washington St. & Van Buren Bl.	A-D	A-D	F / A-D	F	F
9	Gardner Av. & Van Buren Bl.	F	F	F	F	F
10	Porter Av. & Van Buren Bl.	A-D	A-D	A-D	A-D	A-D
11	Chicago Av. / Alta Cresta Av. & Van Buren Bl.	A-D	A-D	E / A-D	F / A-D	F / A-D
12	Dauchy Av. & Van Buren Bl.	A-D	A-D	E / A-D	E	E / F
13	Wood Rd. & Van Buren Bl.	A-D	A-D	F / A-D	E / F	F
14	Trautwein Rd. / Cole Av. & Van Buren Bl.	A-D	A-D	A-D	A-D	A-D
15	Barton St. & Van Buren Bl.	A-D	A-D	A-D	F	F

LEGEND:

- ◖ = *AM Peak Hour*
- ◗ = *PM Peak Hour*
- ● = *A-D*
- ● = *E*
- ● = *F*

EXHIBIT 1-4 : SITE ACCESS RECOMMENDATIONS



LEGEND:

- = Existing Intersection Analysis Location
- = Future Intersection Analysis Location
- = Existing Traffic Signal
- = Future Traffic Signal
- = Proposed Stop Sign
- = Existing Lane
- = Proposed Lane

1.5.2 Off-Site Recommendations

A summary of the off-site intersection improvements is provided in Table 1-3. As shown in Table 1-3, the Project will construct the improvements identified, as discussed in Section 1.5.1 *Site Adjacent and Site Access* Recommendations. Improvements that appear under EAP traffic conditions would be the Project's responsibility to construct to maintain acceptable LOS, if not also required to address Existing deficiencies.

For those improvements listed in Table 1-3 and not constructed as part of the Project, the Project Applicant's responsibility for the Project's contributions towards deficient intersections is fulfilled through payment of fair share or fees (applicable pre-existing fee programs) that would be assigned to construction of the identified recommended improvements. The Project Applicant would be required to pay fair share and fees consistent with the County's requirements (see Section 8 *Local and Regional Funding Mechanisms*). Table 1-3 shows the estimated total Project fair share costs for both the City of Riverside and the County of Riverside based on the recommended improvements.

Recommended storage lengths necessary to accommodate existing or anticipated future 95th percentile queues are shown in Table 1-4.

1.5.3 Queuing Analysis at Project Driveways

A queuing analysis was conducted for Washington Street & Van Buren Boulevard (#8) and the Project driveways for Horizon Year (2045) With Project, with Improvements traffic conditions to determine the turn pocket lengths necessary to accommodate 95th percentile queues. The analysis was conducted for the weekday AM and weekday PM peak hours. The results have been provided in Appendix 1.2 and are summarized in Table 1-5.

SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro to generate random simulations. The 95th percentile queue is derived from the average queue plus 1.65 standard deviations. The 95th percentile queue is not necessarily ever observed; it is simply based on statistical calculations (or Average Queue plus 1.65 standard deviations). Many agencies utilize the 95th percentile queues for design purposes. A vehicle is considered queued whenever it is traveling at less than 10 feet/second. The random simulations generated by SimTraffic have been utilized to determine the 95th percentile queue lengths observed for each turn movement. A SimTraffic simulation has been recorded five (5) times, during the weekday AM and weekday PM peak hours, and has been seeded for 15-minute periods with 60-minute recording intervals.

TABLE 1-3: SUMMARY OF IMPROVEMENTS (1 OF 2)

#	Intersection Location	Jurisdiction	Existing (2025)	EAP (2027)	EAPC (2027)	2045 With Project	Improvements in County TUMF/DIF? [1,2]	Project Responsibility	EAPC (2027) Fair Share %	HY (2045) Fair Share %	Estimated Cost[4]	Project Fair Share Costs[5]
2	King Av. & Van Buren Bl.	County of Riverside	None	Increase NB left turn storage to 125-feet	Increase NB left turn storage to 150-feet	Same	No	Construct	16.9%	8.1%	$46,750	--
						Increase SB left turn storage to 110-feet	No	Fair Share			$46,750	$3,778
						Add WB 3rd through lane	Yes (TUMF)	Fees			--	--
						Modify traffic signal to increase cycle length to 120-seconds for the AM peak hour only	No	Fair Share			$140,250	$11,333
										Total	**$233,750**	**$15,110**
6	Washington St. & Driveway 4	County of Riverside	Install a traffic signal	--	--	--	No	Construct	--	41.9%	$650,000	--
						Modify traffic signal to increase cycle length to 130-seconds for the AM peak hour only	No	Fair Share			$140,250	$58,807
										Total	**$790,250**	**$58,807**
8	Washington St. & Van Buren Bl.	County of Riverside	None	Increase SB left turn storage to 415-feet	Same	Same	No	Construct	25.1%	12.0%	$46,750	--
			None	Add SB right turn lane with a storage length of 190-feet	Same	Same	No	Construct			$93,500	--
			None	Modify traffic signal to increase green time for the EB left turn movement	Same	Same	No	Construct			$140,250	--
			None	Provide 'Keep Clear' striping at the easterly RIRO shopping center driveway on Van Buren Bl.	Same	Same	No	Construct			$46,750	--
			None	Modify the traffic signal to implement overlap phasing for the WB right turn lane	Same	Same	No	Construct			$140,250	--
			None	None	Add 3rd EB through lane	Same	Yes (TUMF)	Fees			--	--
			None	None	Add 3rd WB through lane	Same	Yes (TUMF)	Fees			--	--
			None	None	Increase WB left turn storage to 350-feet	Same	No	Fair Share			$46,750	$11,719
			None	None	None	Modify the traffic signal to implement overlap phasing for the NB right turn lane	No	Fair Share			$140,250	$16,803
			None	None	None	Increase NB left turn lane storage to 190-feet	No	Fair Share			$46,750	$5,601
			None	None	None	Increase NB right turn lane storage to 250-feet					$46,750	$5,601
			None	None	None	Modify traffic signal to increase cycle length to 130-seconds for the AM peak hour only	No	Fair Share			$140,250	$16,803
										Total	**$888,250**	**$56,527**
9	Gardner Av. & Van Buren Bl.	County of Riverside	Install a traffic signal	Same	Same	Same	No	Construct	20.1%	15.7%	$650,000	--
										Total	**$650,000**	**--**
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	County of Riverside, Riverside	None	None	Increase NB left turn lane storage to 125-feet	Increase NB left turn lane storage to 200-feet	No	Fair Share	15.2%	10.3%	$46,750	$4,802
					Add WB 3rd through lane	Same	Yes (TUMF)	Fees			--	--
										Total	**$46,750**	**$4,802**
12	Dauchy Av. & Van Buren Bl.	Riverside	None	None	Add 3rd WB through lane	Same	Yes (TUMF)	Fees	14.0%	11.3%	--	--
										Total	**$0**	**$0**
13	Wood Rd. & Van Buren Bl.[8]	Riverside	None	Restripe the NB approach to accommodate a right turn lane and modify the signal to accommodate overlap phasing	Same	Same	No	Construct	10.6%	5.6%	$187,000	--
				Restripe the EB right turn lane into a shared through-right turn lane	Maintain 3rd EB through lane from EAP	Same	Yes (TUMF)	Fees			--	--
					Add EB right turn lane	Same	No	Fair Share			$93,500	$9,938
					Add WB 3rd through lane	Same	Yes (TUMF)	Fees			--	--
						Increase WB left turn lane storage to 375-feet	No	Fair Share			$46,750	$2,602
										Total	**$327,250**	**$12,540**

TABLE 1-3: SUMMARY OF IMPROVEMENTS (2 OF 2)

#	Intersection Location	Jurisdiction	Existing (2025)	EAP (2027)	EAPC (2027)	2045 With Project	Improvements in County TUMF/DIF? [1,2]	Project Responsibility	EAPC (2027) Fair Share %	HY (2045) Fair Share %	Estimated Cost[4]	Project Fair Share Costs[5]
14	Trautwein Rd./Cole Av. & Van Buren Bl.[9]	Riverside	Increase NB left turn storage to 300-feet	Increase NB left turn storage to 325-feet	Increase NB left turn storage to 410-feet	Same	No	Fair Share	10.4%	6.5%	$46,750	$4,865
			Increase EB left turn storage to 200-feet	Same	Increase EB left turn storage to 250-feet	Increase EB left turn storage to 300-feet	No	Fair Share			$46,750	$4,865
			Increase WB right turn storage to 325-feet	Same	Same	Same	No	Fair Share			$46,750	$4,865
										Total	**$140,250**	**$14,594**
15	Barton St. & Van Buren Bl.[10]	Riverside	Increase WB left turn storage to 525-feet	Same	Increase WB left turn storage to 550-feet	Same	No	Fair Share	6.9%	3.5%	$46,750	$3,246
				Add EB right turn lane with a minimum storage length of 100-feet	Same	Same	No	Construct			$93,500	--
					Increase EB left turn storage to 450-feet	Increase EB left turn storage to 500-feet	No	Fair Share			$46,750	$3,246
						Modify the traffic signal to implement overlap phasing for the EB turn lane	No	Fair Share			$140,250	$4,901
						Add 3rd EB through lane	Yes (TUMF)	Fees			--	--
						Modify traffic signal to increase cycle length to 130-seconds for the AM peak hour only	No	Fair Share			$140,250	$4,901
										Total	**$467,500**	**$16,293**
										Total Cost for Improvements	**$3,544,000**	**$195,476**
										Total Project Fair Share Contribution to the City of Riverside [6]	$43,427	
										Total Project Fair Share Contribution to the County of Riverside [7]	$152,049	

[1] Improvements included in regional TUMF/County DIF fee programs have been identified as such.

[2] Identifies the Project's responsibility to construct an improvement or contribute fair share towards the implementation of the improvements shown.

[2] Program improvements constructed by project may be eligible for fee credit, at discretion of the County. See Table 8-1 for fair share calculations.

[3] The City of Riverside does not have a Fair Share Program. The Project Fair Share calculations are presented in the event that Project is conditioned to install traffic signal infrastructure.

[4] Costs have been estimated using the data provided in Appendix "G" of the CMP (2003) for preliminary construction costs. A growth factor of 1.87 has been utilized to reflect 2025 costs.

[5] Rough order of magnitude cost estimate.

[6] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Riverside.

[7] Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the County of Riverside.

[8] The applicant is solely responsible for the design, procurement and installation of the improvements to the satisfaction of the Director of Public Works for the City of Riverside.

[9] As the City of Riverside currently does not have a fair share program, the Project will be conditioned to construct traffic signal infrastructure improvements such as video detection system at the intersection of Trautwein Road/Cole Avenue & Van Buren Boulevard.

[10] Pursuant to the City of Riverside's draft conditions, the City has indicated that the Project will be conditioned to upgrade the three existing crosswalks to continental crosswalks, and install a video detection system at the intersection of Barton Street & Van Buren Boulevard.

TABLE 1-4: RECOMMENDED TURN LANE STORAGE LENGTHS FOR QUEUES (1 OF 2)

#	Intersection Location	Analysis Scenario				Project Responsibility	Project Fair Share[1]
		Existing	EAP (2027)	EAPC (2027)	2045 With Project		
2	King Av. & Van Buren Bl.	None	Northbound left turn lane: 125-feet	Northbound left turn lane: 150-feet	Same	Construct	--
					Southbound left turn lane: 110-feet	Fair Share	8.1%
8	Washington St. & Van Buren Bl.	None	Southbound left turn lane: 415-feet	Same	Same	Construct	--
		None	None	Westbound left turn lane: 350-feet	Same	Fair Share	25.1%
					Northbound left turn lane: 190-feet	Fair Share	12.0%
					Northbound right turn lane: 250-feet	Fair Share	12.0%
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	None	None	Northbound left turn lane: 125-feet	Northbound left turn lane: 200-feet	Fair Share	15.2%
13	Wood Rd. & Van Buren Bl.	None	None	None	Westbound left turn lane: 375-feet	Fair Share	5.6%
14	Trautwein Rd./Cole Av. & Van Buren Bl.	Northbound left turn lane: 300-feet	Northbound left turn lane: 325-feet[2]	Northbound left turn lane: 410-feet	Same	Fair Share	10.4%
		Eastbound left turn lane: 200-feet	Same	Eastbound left turn lane: 250-feet	Eastbound left turn lane: 300-feet	Fair Share	10.4%
		Westbound right turn lane: 325-feet	Same	Same	Same	Fair Share	10.4%

TABLE 1-4: RECOMMENDED TURN LANE STORAGE LENGTHS FOR QUEUES (2 OF 2)

#	Intersection Location	Analysis Scenario				Project Responsibility	Project Fair Share[1]
		Existing	EAP (2027)	EAPC (2027)	2045 With Project		
15	Barton St. & Van Buren Bl.	Westbound left turn lane: 525-feet	Same	Westbound left turn lane: 550-feet	Same	Fair Share	6.9%
		None	Eastbound right turn lane: 100-feet	Same	Same	Construct	--
		None	None	Eastbound left turn lane: 450-feet	Eastbound left turn lane: 500-feet	Fair Share	6.9%

[1] Fair share percentages are based on EAPC (2027) volumes for near-term improvements and Horizon Year (2045) volumes for Horizon Year improvements.

[2] Although the northbound left-turn movement at Trautwein Rd./Cole Ave. & Van Buren Blvd. experiences a queuing deficiency under Existing (2025) conditions, the Project may be required to construct the storage length recommended under EAP (2027) conditions.

TABLE 1-5: SITE ACCESS QUEUING ANALYSIS

Intersection	Movement	Available Stacking Distance (Feet)	2045 With Project SimTraffic: 95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
3 Driveway 1 & Van Buren Bl.	SBR	--[2]	48	49	Yes	Yes
	WBR	310	4	24	Yes	Yes
4 Driveway 2 & Van Buren Bl.	SBR	--[2]	59	56	Yes	Yes
	WBT/R	220	8	18	Yes	Yes
5 Washington St. & Driveway 3	NBL/T	180	34	35	Yes	Yes
	SBT/R	350	319	316	Yes	Yes
	EBL/R	--[2]	242	265	Yes	Yes
6 Washington St. & Driveway 4	NBL	170	101	143	Yes	Yes
	NBR	415	47	67	Yes	Yes
	SBL/T	320	191	189	Yes	Yes
	SBT/R	215	172	181	Yes	Yes
	EBL/T/R	--[2]	105	146	Yes	Yes
7 Washington St. & Driveway 5	SBR	50	0	0	Yes	Yes
	EBR	--[2]	22	26	Yes	Yes
8 Washington St. & Van Buren Bl.	SBL	180	166	166	Yes	Yes
	SBL	415	176	177	Yes	Yes
	SBR	190	76	146	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided for the 95th percentile queue only. An additional 25 feet of stacking is assumed to be provided within the transition for turn pockets, where applicable, in determining whether storage requirement is met.

[2] Movement is part of the site (Project Driveway, new Project access road, etc.), so stacking distance has not been provided.

2 METHODOLOGIES

This section of the report presents the methodologies used to perform this TA. The methodologies described are consistent with County's Guidelines. (1)

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 a 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. The 7th Edition Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (5) The HCM uses different procedures depending on the type of intersection control.

2.2.1 Signalized Intersections

The County of Riverside requires signalized intersection operations analysis based on the methodology described in the HCM. (5) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1.

Consistent with the Riverside County CMP, a saturation flow rate of 1900 vehicles per hour green per lane (vphgpl) has been utilized for all intersections for all scenarios.

The traffic modeling and signal timing optimization software package Synchro (Version 12) has been utilized to analyze signalized intersections. 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 level of service 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. Customary 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. Per the HCM,

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. (5)

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0[1]
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B
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
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
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
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F

Source: HCM, 7th Edition

[1] If V/C is greater than 1.0 then LOS is F per HCM.

2.2.2 Unsignalized Intersections

The County of Riverside requires the operations of unsignalized intersections to be evaluated using the methodology described in the Highway Capacity Manual (HCM). (6) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2). At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. Delay for the intersection is reported for the worst individual movement at a two-way stop-controlled intersection. For all-way stop-controlled intersections, LOS is computed for the intersection as a whole (average delay).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service V/C ≤ 1.0[1]
Little or no delays.	0 to 10.00	A
Short traffic delays.	10.01 to 15.00	B
Average traffic delays.	15.01 to 25.00	C
Long traffic delays.	25.01 to 35.00	D
Very long traffic delays.	35.01 to 50.00	E
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F

Source: HCM, 7th Edition

[1] If V/C is greater than 1.0, then LOS is F per HCM

2.3 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 determine the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD). (7)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (7) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions and for all future analysis scenarios for existing unsignalized intersections. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics. 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. Rural warrants have been used where posted speed limits on the major roadways with unsignalized intersections are over 40 miles per hour while urban warrants have been used where speeds are 40 miles per hour or below.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Similarly, the speed limit has been used as the basis for determining the use of Urban and Rural warrants. Traffic signal warrant analyses were performed for the study area intersections shown in Table 2-3.

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

#	Intersection
5	Washington St. & Driveway 3
6	Washington St. & Driveway 4
9	Gardner Av. & Van Buren Bl.

Although unsignalized, the study area intersections of Driveway 1 & Van Buren Boulevard (#3), Driveway 2 & Van Buren Boulevard (#4), and Washington Street & Driveway 5 (#7) have not been evaluated for traffic signal warrants as the intersections are restricted access (right-in/right-out only).

The traffic signal warrant analyses are presented in Section 3 *Area Conditions*, Section *5 EAP Traffic Conditions*, Section 6 *EAPC (2027) Traffic Conditions*, and Section 7 *Horizon Year (2045) Traffic Conditions*. 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 threshold 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.

2.4 QUEUING ANALYSIS

The County has requested a queuing analysis at signalized study intersections. The results of these analyses are presented in the subsequent sections of this traffic study.

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/needs of the signalized intersections. Storage (turn-pocket) length recommendations at the intersections have been based upon the 95th percentile queue resulting from the Synchro progression analysis. The footnote from the Synchro output sheets indicates if the 95th percentile cycle exceeds capacity. Traffic is simulated for two complete cycles of the 95th percentile traffic in Synchro in order to account for the effects of spillover between cycles. In practice, the 95th percentile queue shown will rarely be exceeded and the queues shown with the footnote are acceptable for the design of storage bays. The 95th percentile queue is derived from the average queue plus 1.65 standard deviations. The 95th percentile queue is not necessarily ever observed, it is simply based on statistical calculations

2.5 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

Minimum Acceptable LOS and associated definitions of intersection deficiencies have been obtained from each of the applicable surrounding jurisdictions.

2.5.1 County of Riverside

The definition of an intersection deficiency has been obtained from the County of Riverside General Plan. Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target LOS:

The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan which are currently County maintained, or are intended to be accepted into the County maintained roadway system:

- *LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well as those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non-Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.*
- *LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.*
- *LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.*

The applicable minimum LOS utilized for the purposes of this analysis is LOS D per the County-wide target LOS for projects located within the Woodcrest area plan. (1)

2.5.2 City of Riverside

The City of Riverside General Plan states the City will strive to maintain LOS D or better on arterial streets wherever possible. At some key locations, such as City arterial roadways, which are used as freeway bypass by regional through traffic and at heavily traveled freeway intersections, LOS E may be acceptable as determined on a case-by-case basis. Locations that may warrant the LOS E standard include portions of Arlington Avenue/Alessandro Boulevard, Van Buren Boulevard throughout the City, portions of La Sierra Avenue, and selected freeway interchanges. A higher standard, such as LOS C or better, may be adopted for Local and Collector streets in residential areas. The City recognizes that along key freeway feeder segments during peak commute hours, LOS F may be expected due to regional travel patterns.

At the City's request, the analysis for all study area intersections and roadway segments that lie within the City of Riverside will be evaluated based on the guidelines outlined in the City's Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (April 2025). (9) As such, the minimum LOS utilized for the purposes of this analysis is LOS D for intersections located partially or wholly within the City of Riverside.

2.6 DEFICIENCY CRITERIA

2.6.1 City of Riverside

To determine whether the addition of Project traffic at a study intersection would result in a project-specific traffic deficiency, the following will be utilized:

- When the pre-Project condition is at or better than LOS D (i.e., acceptable LOS), and project-generated traffic, as measured by 50 or more peak hour trips, causes deterioration below LOS D

(i.e., unacceptable LOS) or increases to the peak hour delay as defined in Table 2-4, a deficiency is deemed to occur.

TABLE 2-4: CITY OF RIVERSIDE INTERSECTION DEFICIENCY CRITERIA

Pre-Project LOS	Project-Related Delay Increase	Recommended Improvements
A/B	10.0 Seconds or More	Achieve Pre-project delay or better
C	8.0 Seconds or More	Achieve Pre-project delay or better
D	5.0 Seconds or More	Achieve Pre-project delay or better
E	2.0 Seconds or More	Achieve Pre-project delay or better
F	1.0 Second or More	Achieve Pre-project delay or better

2.7 PROJECT FAIR SHARE CALCULATION METHODOLOGY

Improvements found to be included in the WRCOG TUMF and/or Development Impact Fee (DIF) programs will be identified as such. For improvements that do not appear to be in either of the pre-existing fee programs, a fair share contribution based on the Project's proportional share may be imposed in order to address the Project's share of deficiencies in lieu of construction. It should be noted that fair share calculations are for informational purposes only and the County Traffic Engineer will determine the appropriate improvements to be implemented by a project (to be identified in the conditions of approval). The Project's fair share cost of improvements would be determined based on the following equation, which is the ratio of Project traffic to new traffic, where new traffic is total future traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (Horizon Year (2045) Total Traffic – Existing (2025) Traffic)

For improvements recommended under near-term conditions, the Project's fair share cost of improvements would be calculated using EAPC (2027) traffic volumes in lieu of the Horizon Year forecasts.

3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the County of Riverside General Plan Circulation Network, and a review of existing peak hour intersection operations, traffic signal warrant, and queuing analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with County of Riverside staff (Appendix 1.1), the study area includes a total of 15 existing and future intersections as shown previously in Exhibit 1-3. 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 COUNTY OF RIVERSIDE GENERAL PLAN CIRCULATION ELEMENT

Exhibit 3-2 shows the County of Riverside Lake Mathews/Woodcrest Area Plan Circulation Element and Exhibit 3-3 illustrates the County of Riverside General Plan roadway cross-sections.

Urban Arterials are six-lane divided roadways (typically divided by a raised median or painted two-way turn-lane) with a 152-foot right-of-way and a 110-foot curb-to-curb measurement. These roadways serve both regional through-traffic and inter-city traffic and typically direct traffic onto and off-of the freeways. The following study area roadway within the County of Riverside is classified as an Urban Arterial:

- Van Buren Boulevard

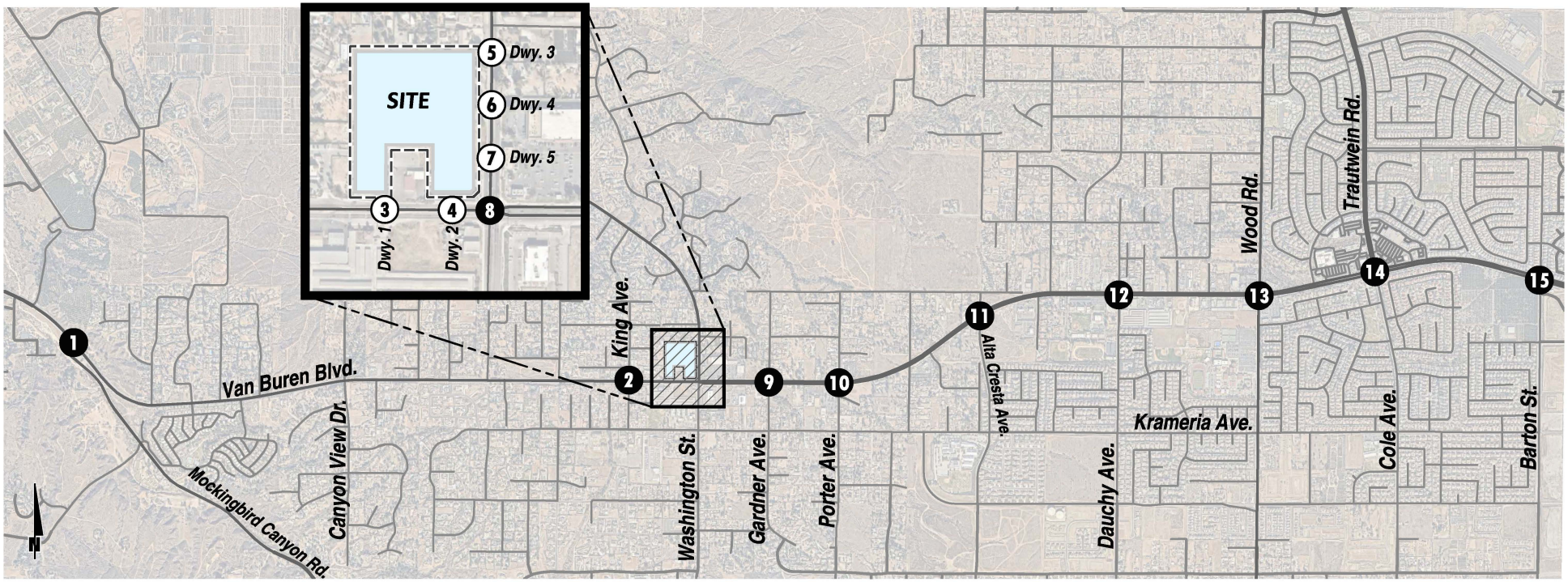
Arterials are four-lane roadways and may include a painted median. These roadways typically have a 128-foot right-of-way and an 82-to-86-foot curb-to-curb measurement. These roadways typically direct traffic through major development areas and have a lesser capacity than Urban Arterials. The following study area roadway within the County of Riverside is classified as an Arterial:

- Washington Street, north of Van Buren Boulevard

Major Roadways are four-lane roadways and may include a painted median. These roadways typically have a 118-foot right-of-way and a 76-foot curb-to-curb measurement. These roadways typically direct traffic through major development areas. The following study area roadway within the County of Riverside is classified as a Major Roadway:

- Washington Street, south of Van Buren Boulevard

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



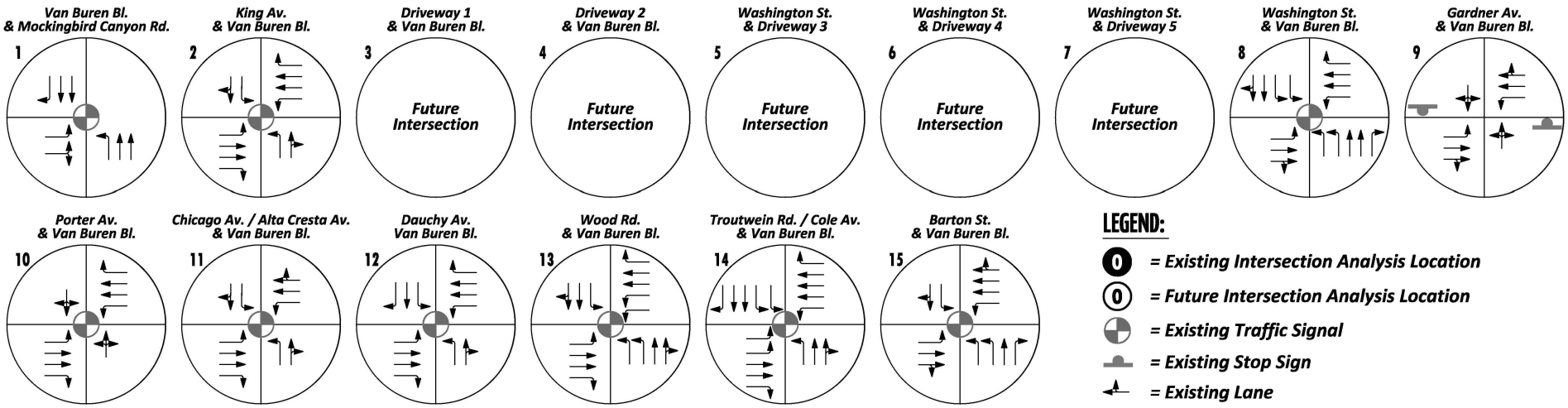


EXHIBIT 3-2 : LAKE MATHEWS / WOODCREST AREA PLAN CIRCULATION ELEMENT

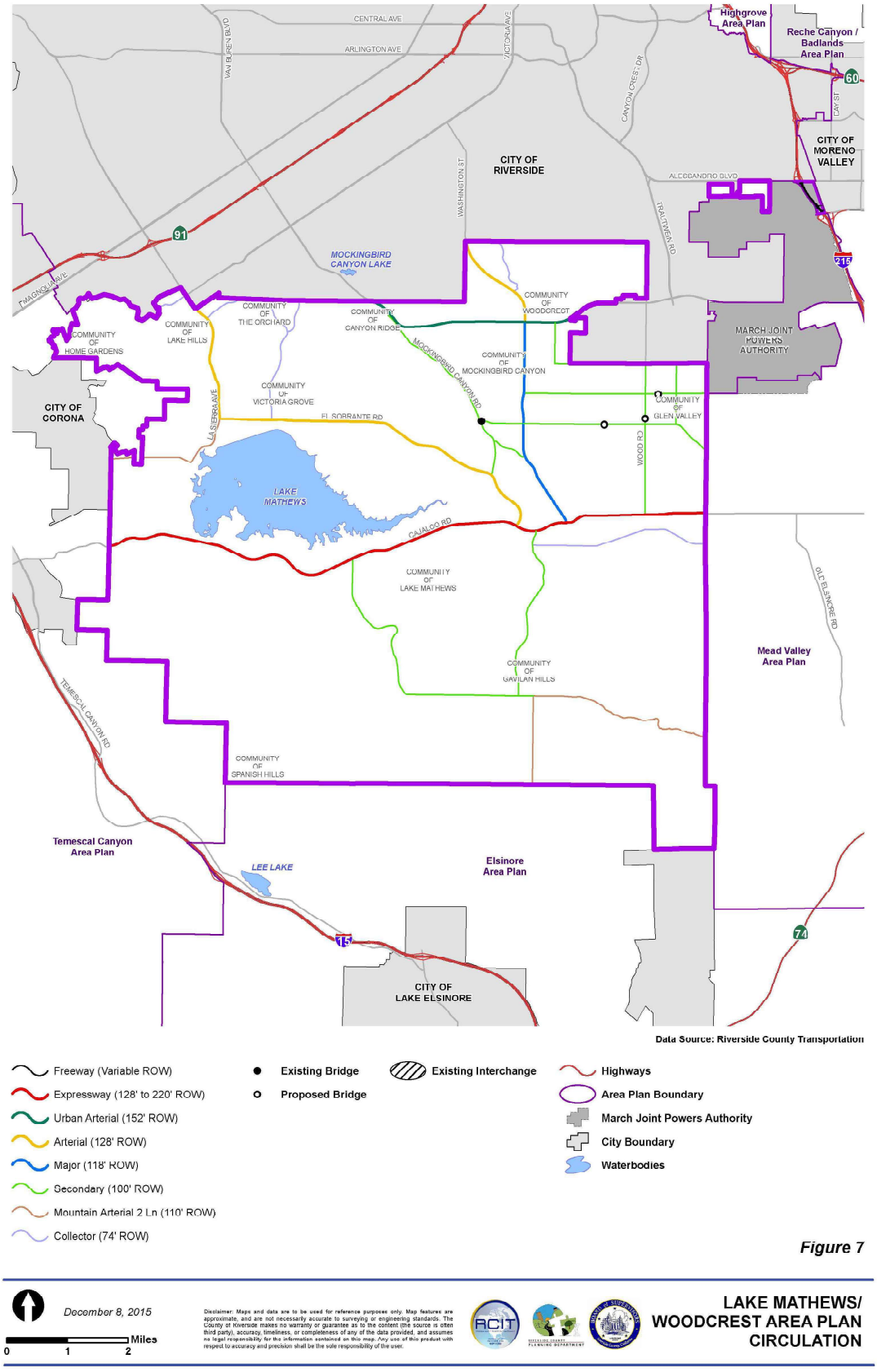
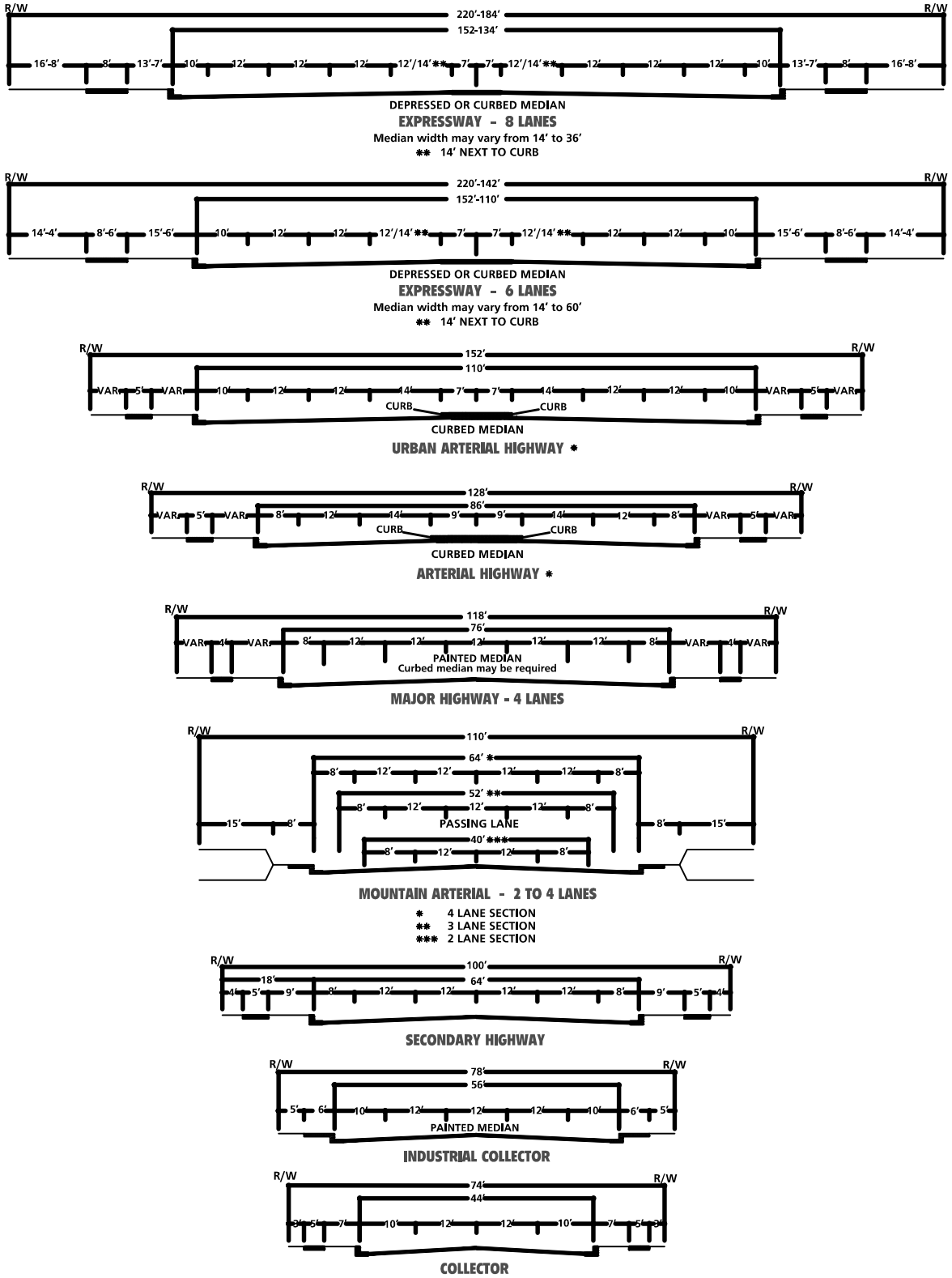


Figure 7

EXHIBIT 3-3 : COUNTY OF RIVERSIDE GENERAL PLAN ROADWAY CROSS-SECTIONS



* IMPROVEMENTS MAY BE RECONFIGURED TO ACCOMMODATE EXCLUSIVE TRANSIT LANES OR ALTERNATIVE LANE ARRANGEMENTS ADDITIONAL RIGHT OF WAY MAY BE REQUIRED AT INTERSECTIONS TO ACCOMMODATE ULTIMATE IMPROVEMENTS FOR STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS.

NOT TO SCALE

SOURCE: COUNTY OF RIVERSIDE
March 2, 2023

3.3 BICYCLE & PEDESTRIAN FACILITIES

Exhibit 3-4 illustrates the Lake Mathews/Woodcrest Area Plan bicycle facilities. Existing pedestrian facilities within the study area are shown in Exhibit 3-5. As shown in Exhibit 3-5, there are limited pedestrian facilities in the vicinity of the Project site. Field observations and traffic counts conducted in May 2025 indicate moderate pedestrian and bicycle activity in the AM peak hour, most likely from the nearby elementary school.

3.4 TRANSIT SERVICE

The study area within the County of Riverside is currently served by Riverside Transit Agency (RTA), a public transit agency serving various jurisdictions within Riverside County. Existing transit routes in the vicinity of the study area are illustrated in Exhibit 3-6. As shown, the existing RTA Route 27 runs along Van Buren Boulevard to the south of the Project. There is an existing bus stop on Van Buren Boulevard near Washington Street. Service times for the stops along RTA Route 27 are approximately every 60 minutes during the weekday peak hours. Transit service is reviewed and updated by RTA periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. As such, it is recommended that the Project Applicant work in conjunction with RTA to potentially extend the existing routes to accommodate bus service to the site.

3.5 EXISTING (2025) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in May 2025. The following peak hours were selected for analysis:

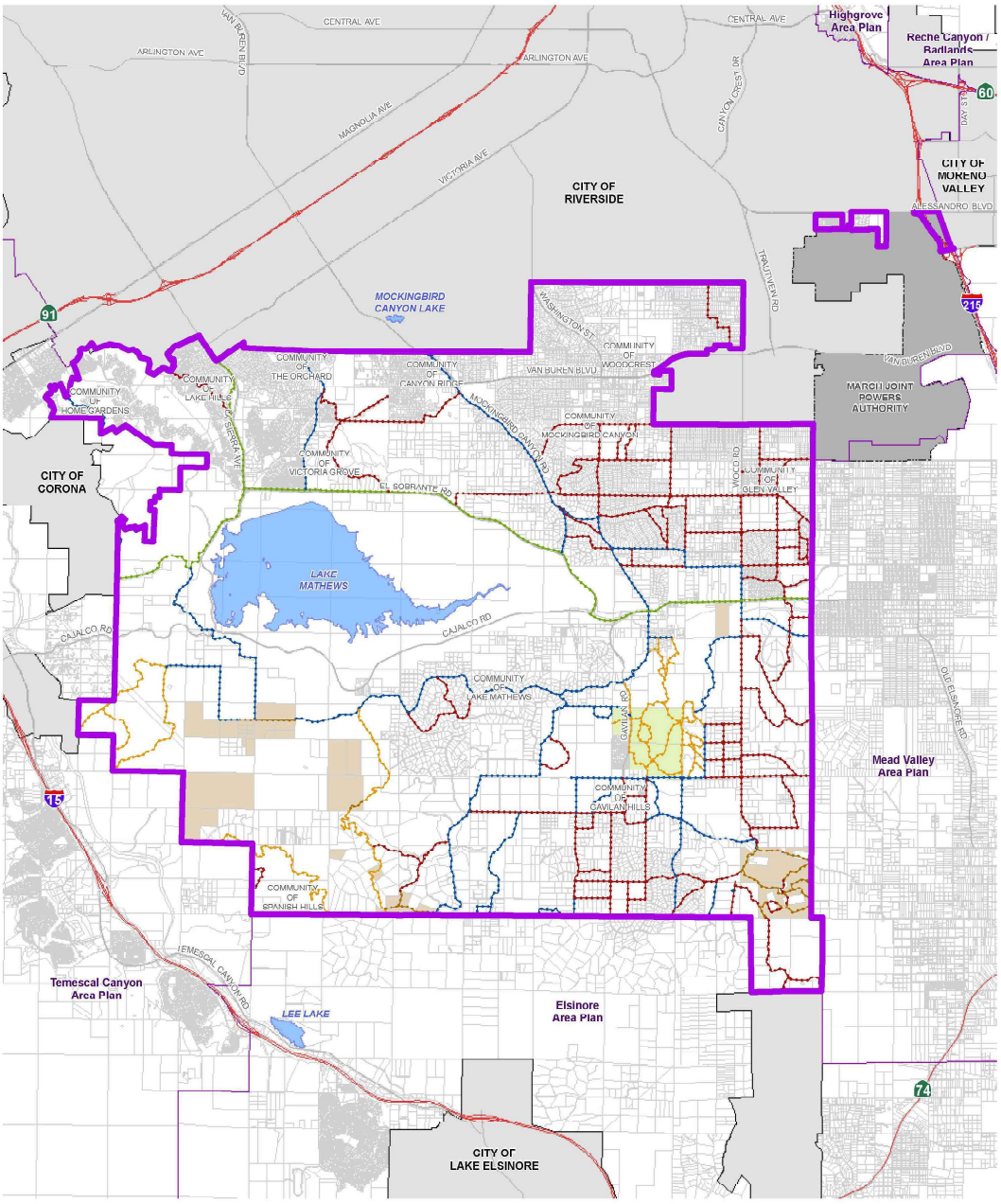
- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The 2025 weekday AM and weekday PM peak hour count data is representative of typical weekday 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 or detour routes and nearby schools were in session and operating on normal schedules. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. Existing weekday ADT volumes are shown on Exhibit 3-7. Where actual 24-hour tube count data was not available, Existing ADT volumes were 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 8.07 = Leg Volume

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 12.38 percent. As such, the above equation utilizing a factor of 8.07 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of 12.38 percent (i.e., 1/0.1238 = 8.07) and was assumed to sufficiently estimate ADT volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes are also shown on Exhibit 3-7.

EXHIBIT 3-4 : LAKE MATHEWS / WOODCREST AREA PLAN BICYCLE FACILITIES



Data Source: Riverside County Parks

- Regional Trail: Urban/Suburban
- Community Trail
- Combination Trail (Regional Trail / Class I Bike Path)
- Regional Trail: Open Space
- Non-County Trail (Public and Quasi-Public Lands)
- Miscellaneous Public Lands
- Bureau of Land Management (BLM) Lands
- Highways
- Area Plan Boundary
- March Joint Powers Authority
- City Boundary
- Waterbodies

Note: Trails shown in non-county jurisdictions for informational/coordination purposes only.

Data Source: Primarily Riverside County Regional Park and Open Space District, with assistance from Riverside County TLMA/Transportation and Planning Departments, Riverside County Environmental Development Agency, and other local, state, and federal recreational services agencies.

Note: Trails and bikeway maps are a graphic representation identifying the general location and classification of existing and proposed trails and bikeways in the unincorporated area of the County. All questions regarding precise alignment or improvement standards should be referred to the Riverside County Regional Park and Open Space District.

Note: Except for major regional facilities, trails and bikeways systems located within cities are generally not shown. Where trails and bikeways exist or are planned in the unincorporated area in such a manner that there are opportunities for connections with existing or planned trails and bikeways within adjacent cities, an arrow symbol is used to show the approximate location of the interested connection opportunity. The reader should consult the appropriate city for all information about that city's existing or planned trails and bikeways systems.

Figure 8

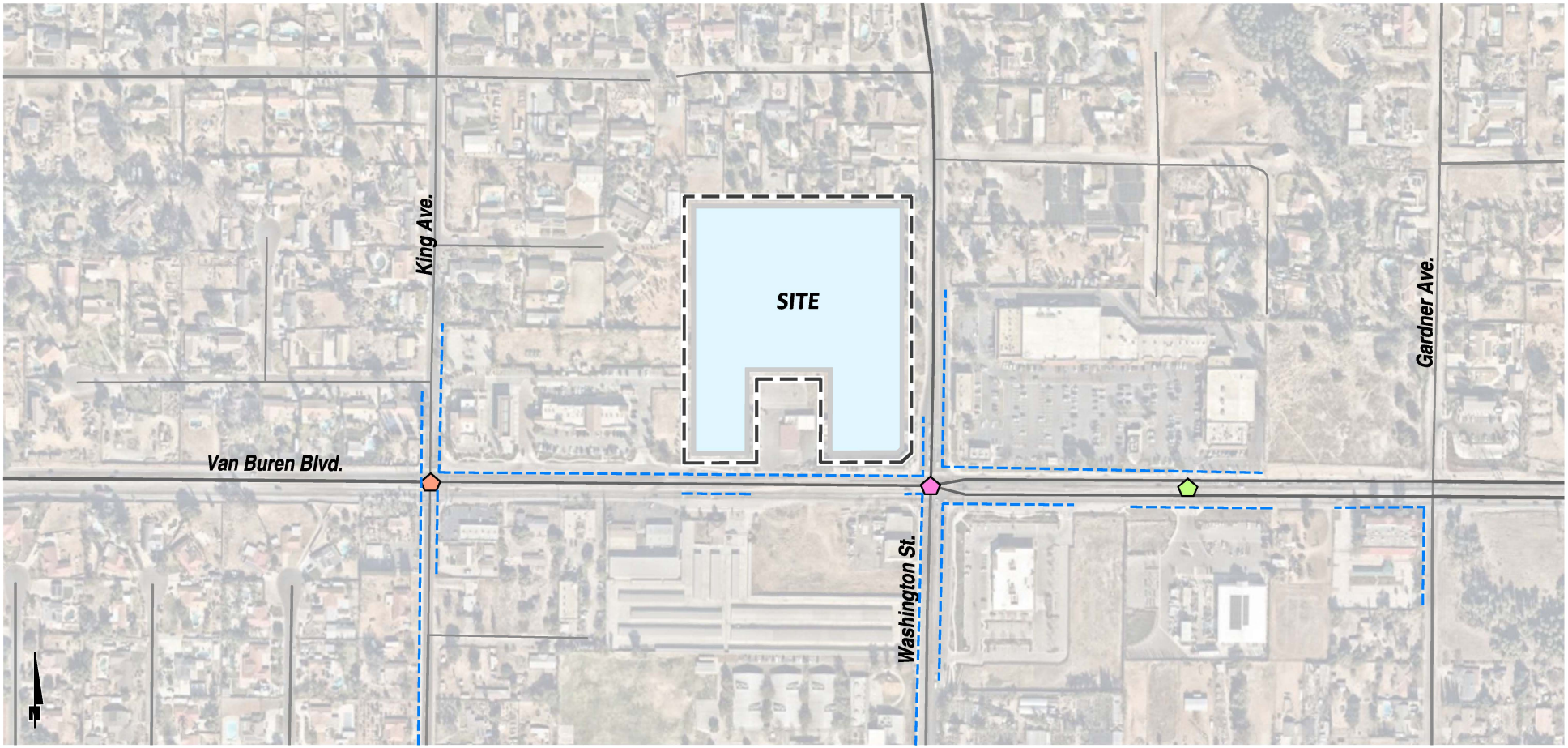
Doocombor 8, 2015

0 1 2 Miles

Disclaimer: Maps and data are to be used for reference purposes only. Map features are approximate, and are not necessarily accurate to surveying or engineering standards. The County of Riverside makes no warranty or guarantee as to the content (the source is often third party), accuracy, timeliness, or completeness of any of the data provided, and assumes no legal responsibility for the information contained on this map. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user.

LAKE MATHEWS/ WOODCREST AREA PLAN TRAILS AND BIKEWAY SYSTEM

EXHIBIT 3-5 : EXISTING PEDESTRIAN FACILITIES



LEGEND:

- = 2 Approaches
- = 3 Approaches
- = All Approaches
- = Sidewalks

EXHIBIT 3-6 : EXISTING TRANSIT ROUTES

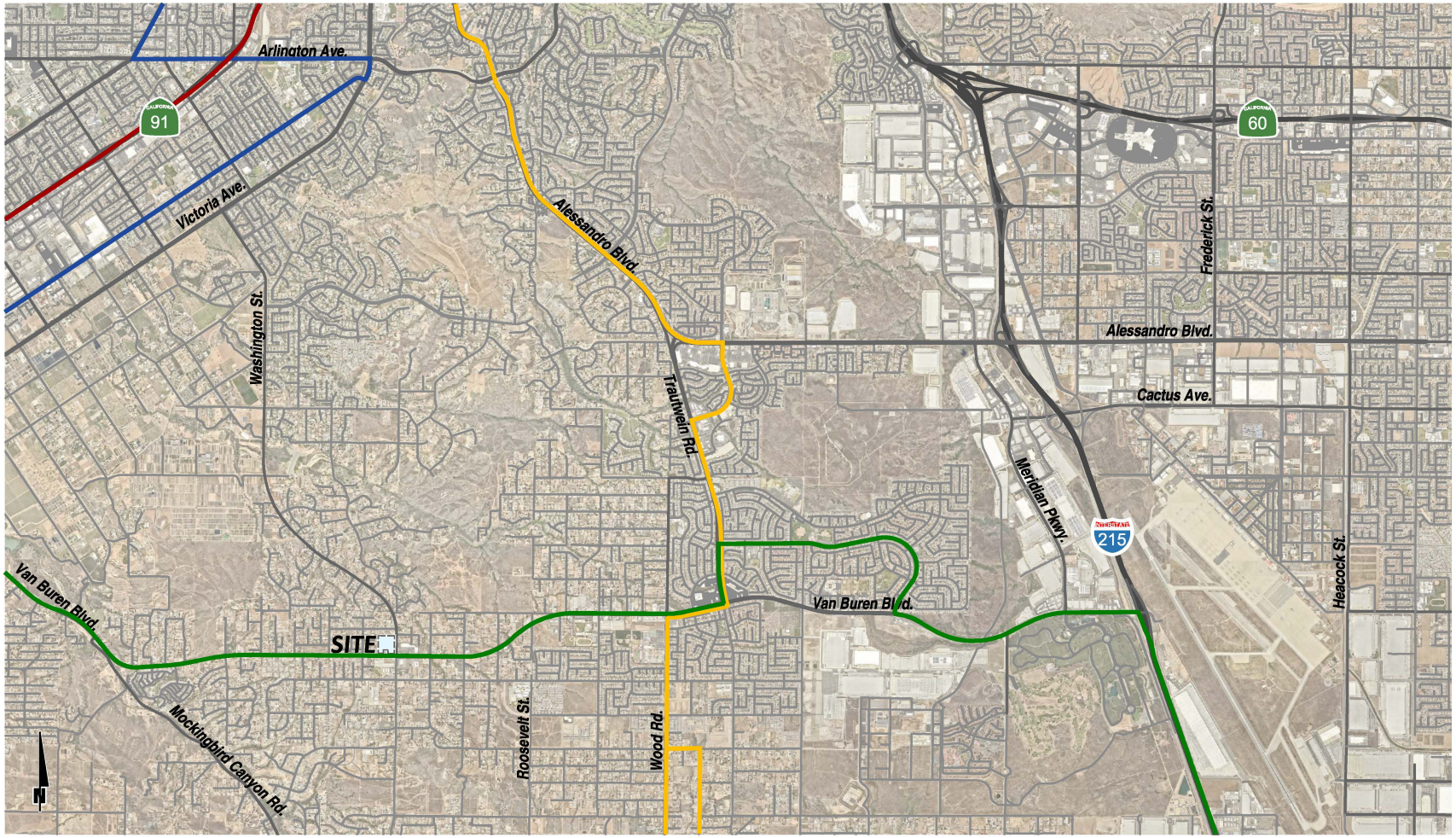
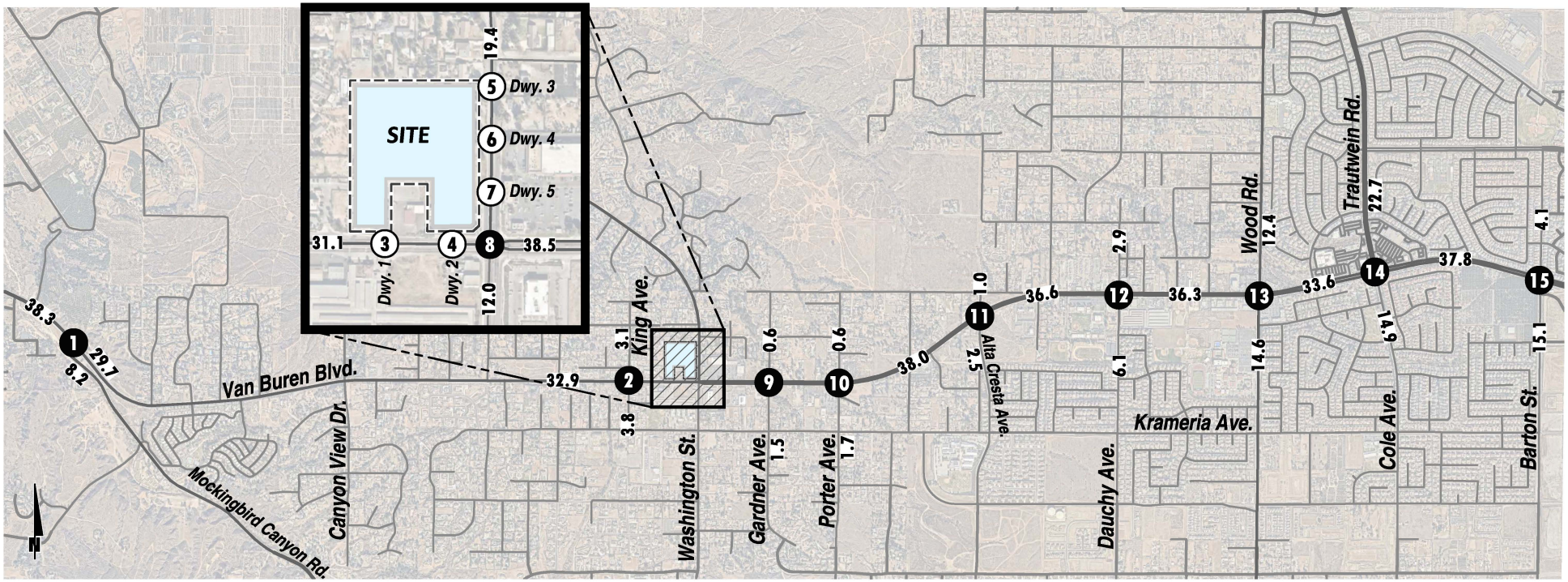
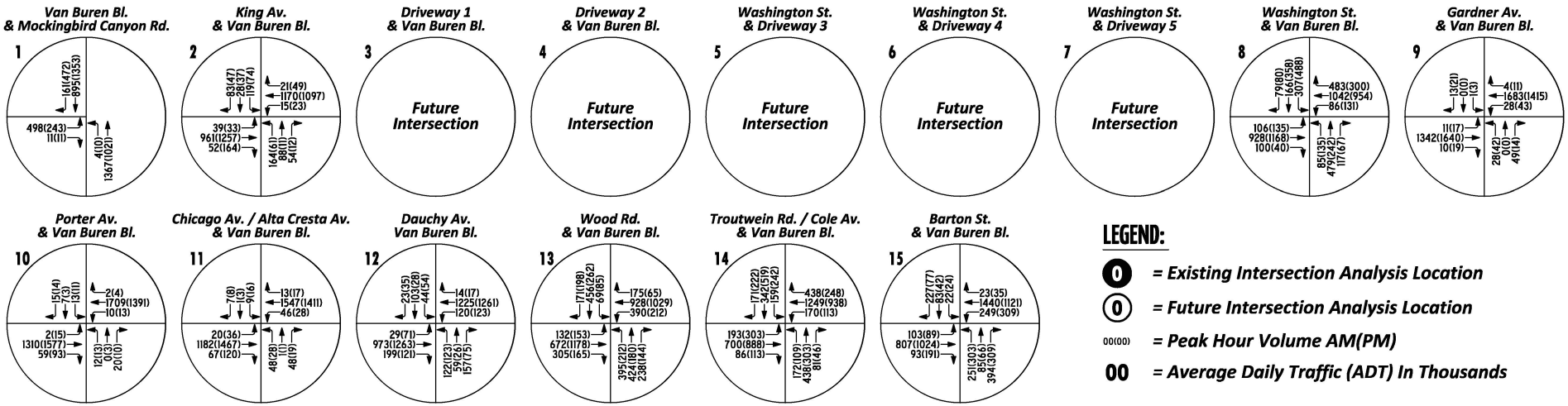


EXHIBIT 3-7 : EXISTING (2025) TRAFFIC VOLUMES





LEGEND:

- (0) = Existing Intersection Analysis Location
- (0) = Future Intersection Analysis Location
- 00(00) = Peak Hour Volume AM(PM)
- 00 = Average Daily Traffic (ADT) In Thousands

3.6 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.* The intersection operations analysis results are summarized in Table 3-1, which indicates that the following study area intersections are currently operating at an unacceptable LOS during the peak hours:

- Washington Street & Driveway 4 (#6) – LOS E AM peak hour; LOS F PM peak hour
- Gardner Avenue & Van Buren Boulevard (#9) – LOS F AM and PM peak hours

TABLE 3-1: EXISTING (2025) INTERSECTION ANALYSIS

#	Intersection	Traffic Control[2]	Existing (2025)			
			Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM
1	Van Buren Bl. & Mockingbird Canyon Rd.	TS	10.0	7.3	B	A
2	King Av. & Van Buren Bl.	TS	19.6	15.8	B	B
3	Driveway 1 & Van Buren Bl.	--	Future Intersection			
4	Driveway 2 & Van Buren Bl.	--	Future Intersection			
5	Washington St. & Driveway 3	--	Future Intersection			
6	Washington St. & Driveway 4	CSS	**43.6**	**142.0**	**E**	**F**
7	Washington St. & Driveway 5	--	Future Intersection			
8	Washington St. & Van Buren Bl.	TS	32.3	34.2	C	C
9	Gardner Av. & Van Buren Bl.	CSS	**710.1**	**2,658.4**	**F**	**F**
10	Porter Av. & Van Buren Bl.	TS	7.7	7.6	A	A
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	TS	11.8	10.9	B	B
12	Dauchy Av. & Van Buren Bl.	TS	20.0	21.2	C	C
13	Wood Rd. & Van Buren Bl.	TS	40.4	28.2	D	C
14	Trautwein Rd./Cole Av. & Van Buren Bl.	TS	28.0	25.7	C	C
15	Barton St. & Van Buren Bl.	TS	38.5	42.7	D	D

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

[1] Per the Highway Capacity Manual (7th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[2] TS = Traffic Signal; CSS = Cross-Street Stop

The intersection analysis worksheets are included in Appendix 3.2.

3.7 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. The following intersections warrant a traffic signal under Existing (2025) conditions:

- Washington Street & Driveway 4 (#6)
- Gardner Avenue & Van Buren Boulevard (#9)

Existing conditions traffic signal warrant analysis worksheets are provided in Appendix 3.3.

3.8 QUEUING ANALYSIS

At the request of the County, a queuing analysis has been conducted at all signalized study area intersections. Queuing analysis results are presented in Table 3-2. Worksheets for Existing (2025) traffic conditions queuing analysis are provided in Appendix 3.4.

TABLE 3-2: QUEUING SUMMARY FOR EXISTING (2025) CONDITIONS (1 OF 3)

#	Intersection	Movement	Available Stacking Distance (Feet)	Existing (2025)			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM
1	Van Buren Bl. & Mockingbird Canyon Rd.	NBL	210	11	24	Yes	Yes
		SBR	100	7	10	Yes	Yes
		EBL[3]	100	163	109	Yes	Yes
		EBL/R	100	0	0	Yes	Yes
2	King Av. & Van Buren Bl.	NBL	100	115	47	Yes	Yes
		SBL	85	87	55	Yes	Yes
		EBL[3]	200	61 [2]	50	Yes	Yes
		EBR	80	0	57	Yes	Yes
		WBL	175	30	39	Yes	Yes
		WBR	160	0	0	Yes	Yes
8	Washington St. & Van Buren Bl.	NBL	140	64	88	Yes	Yes
		NBR	140	36	0	Yes	Yes
		SBL	130	**205** [2]	**324** [2]	**No**	**No**
		EBL	280	190 [2]	232 [2]	Yes	Yes
		WBL	300	155 [2]	236 [2]	Yes	Yes
		WBR	300	281	62	Yes	Yes

TABLE 3-2: QUEUING SUMMARY FOR EXISTING (2025) CONDITIONS (2 OF 3)

#	Intersection	Movement	Available Stacking Distance (Feet)	Existing (2025) Synchro: 95th Percentile Queue (Feet) AM Peak Hour	PM Peak Hour	Acceptable?[1] AM	PM
10	Porter Av. & Van Buren Bl.	EBL	295	10	32	Yes	Yes
		EBR	130	19	36	Yes	Yes
		WBL	305	27	29	Yes	Yes
		WBR	140	0	0	Yes	Yes
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	NBL	95	82	56	Yes	Yes
		SBL	50	27	38	Yes	Yes
		EBL	275	46	77 [2]	Yes	Yes
		EBR	80	22	56	Yes	Yes
		WBL	295	91 [2]	57	Yes	Yes
12	Dauchy Av. & Van Buren Bl.	NBL[3]	60	98	88	Yes	Yes
		SBL	75	43	45	Yes	Yes
		SBR	50	0	0	Yes	Yes
		EBL	295	51	128 [2]	Yes	Yes
		EBR	95	100	40	Yes	Yes
		WBL	420	180 [2]	206 [2]	Yes	Yes
		WBR	160	0	0	Yes	Yes
13	Wood Rd. & Van Buren Bl.	NBL	485	261 [2]	128	Yes	Yes
		SBL[3]	80	112	146 [2]	Yes	Yes
		EBL	400	222 [2]	221 [2]	Yes	Yes
		EBR	300	183	31	Yes	Yes
		WBL	350	246 [2]	143 [2]	Yes	Yes
		WBR	235	58	0	Yes	Yes
14	Trautwein Rd./Cole Av. & Van Buren Bl.	NBL	200	**278** [2]	163 [2]	**No**	Yes
		SBL	250	99	135	Yes	Yes
		SBR	200	86	116	Yes	Yes
		EBL	150	146 [2]	**177** [2]	Yes	**No**
		EBR	200	15	33	Yes	Yes
		WBL	160	**275** [2]	169 [2]	**No**	Yes
		WBR	180	**285**	49	**No**	Yes

TABLE 3-2: QUEUING SUMMARY FOR EXISTING (2025) CONDITIONS (3 OF 3)

#	Intersection	Movement	Available Stacking Distance (Feet)	Existing (2025)			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM
15	Barton St. & Van Buren Bl.	NBL[3]	150	171 [2]	172	Yes	Yes
		NBR	145	139	73	Yes	Yes
		SBL	125	49	51	Yes	Yes
		EBL	400	196 [2]	128	Yes	Yes
		WBL	190	**392** [2]	**509** [2]	**No**	**No**

***BOLD** = 95th percentile queue exceeds the available storage

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided for the 95th queue only. An additional 25 feet of stacking is assumed to be provided within the transition for turn pockets, where applicable, in determining whether storage requirement is met.

[2] 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

[3] The existing painted median provides adequate storage to accommodate periodic 95th percentile queues.

3.9 DEFICIENCIES AND IMPROVEMENTS

3.9.1 Intersections

Improvement strategies have been recommended at intersections that have been identified as deficient under Existing (2025) traffic conditions in an effort to achieve an acceptable LOS. The effectiveness of the recommended improvement strategies to address Existing (2025) traffic deficiencies are presented in Table 3-3. Worksheets for Existing (2025), with Improvements, are provided in Appendix 3.5.

3.9.2 Queues

Improvements to address queuing deficiencies have been identified where feasible and are shown in Table 3-4. Improvements have not been identified at the following movements, as improvements are not considered feasible due to physical constraints on the existing roadways at noted:

- Washington Street & Van Buren Boulevard (#8), Southbound left-turn lane: accommodating 325-foot southbound left turn lanes would require additional right-of-way and would extend beyond the existing easterly driveway for the shopping center located on the northeast corner which is approximately 250-feet north of Van Buren Boulevard. However, the Project includes improvements on the west side of Washington Street (southbound approach) that are anticipated to improve queue performance in the southbound left-turn lanes. Therefore, while a queuing deficiency is observed under Existing (2025) traffic conditions, the deficiency is not expected to occur under future scenarios evaluated with the Project
- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14), Westbound left-turn lane: improvement may not be feasible to modify the existing landscaped median to lengthen the westbound left turn storage without impacting the required reverse curve and/or the storage for the eastbound left turn pocket at the upstream driveway into the existing Albertson's shopping center.

TABLE 3-3: EXISTING (2025) INTERSECTION ANALYSIS WITH IMPROVEMENTS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
6	Washington St. & Driveway 4																	
	Without Improvements:	CSS	0	1	0	0	1	0	0	0	0	0	1	0	**43.6**	**142.0**	**E**	**F**
	With Improvements:	**TS**	0	1	0	0	1	0	0	0	0	0	1	0	7.1	8.3	A	A
9	Gardner Av. & Van Buren Bl.																	
	Without Improvements:	CSS	0	1	0	0	1	0	1	2	0	1	2	0	**710.1**	**2,658.4**	**F**	**F**
	With Improvements:	**TS**	0	1	0	0	1	0	1	2	0	1	2	0	11.3	11.7	B	B

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

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; >> = Free-Right Turn Lane; > = Right-Turn Overlap Phasing; **1** = Improvement

2 Per the Highway Capacity Manual 7th Edition, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

3 CSS= Cross-Street Stop; TS = Traffic Signal

TABLE 3-4: EXISTING (2025) QUEUING SUMMARY WITH IMPROVEMENTS

#	Intersection	Movement	Available Stacking Distance (Feet)	Existing (2025)			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM
14	Trautwein Rd./Cole Av. & Van Buren Bl.	NBL	300	278 [2]	163 [2]	Yes	Yes
		EBL	200	146 [2]	177 [2]	Yes	Yes
		WBR	325	285	49	Yes	Yes
15	Barton St. & Van Buren Bl.	WBL	525	392 [2]	509 [2]	Yes	Yes

***BOLD** = 95th percentile queue exceeds the available storage; Underline = Improvement

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided for the 95th queue only. An additional 25 feet of stacking is assumed to be provided within the transition for turn pockets, where applicable, in determining whether storage requirement is met.

[2] 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

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. The Project proposes a Base Development Concept, and a "Parcel 1 Option" development concept. Under the Base Development Concept, Parcel 1 would be developed with a convenience store/retail gas station. Under the Parcel 1 Option, it would be developed with retail/restaurant uses. Under either development concept, the remainder of the Project site (Parcels 2 – 6) would be developed with a supermarket, shops, and restaurant uses. Access to the Project site will be accommodated via the following driveways:

- Driveway 1 on Van Buren Boulevard – right-in/right-out access only
- Driveway 2 on Van Buren Boulevard – right-in/right-out access only
- Driveway 3 on Washington Street – full access
- Driveway 4 on Washington Street – full access (to align with existing center to the east)
- Driveway 5 on Washington Street – right-in/right-out access only

The study evaluated the Project land uses that would result in likely maximum impacts. Generally, uses that generate the greatest traffic volumes tend to have the greatest potential environmental impacts. This is because, all other factors being equal, development-related traffic volumes correlate directly with transportation deficiencies, vehicular-source criteria pollutants and greenhouse gases, and vehicular-source noise. All of these impacts are further increased under congested traffic conditions. The assumed Opening Year for the Project is 2027.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic, which is both attracted to and produced by, a land use project. 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.

In order to develop the traffic characteristics of the proposed Project, trip generation statistics published in the ITE Trip Generation Manual (11th Edition, 2021) were used to estimate the trip generation. (2) The following ITE land use codes and vehicle mix will be utilized for the proposed Project (trip generation rates for the Project are shown in Table 4-1):

- Strip Retail Plaza (<40,000 SF) (ITE Land Use Code 822)
- Supermarket (ITE Land Use Code 850)
- Fast Food without Drive-Thru (ITE Land Use Code 933)
- Fast Food with Drive-Thru (ITE Land Use Code 934)
- Gas Station with Convenience Market (ITE Land Use Code 945)

TABLE 4-1: TRIP GENERATION RATES

Land Use[1]	ITE Land Use Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Strip Retail Plaza (<40,000 SF)	822	TSF	1.42	0.94	2.36	3.30	3.29	6.59	54.45
Supermarket	850	TSF	1.69	1.17	2.86	4.48	4.47	8.95	93.84
Fast Food without Drive-Thru	933	TSF	25.04	18.14	43.18	16.61	16.60	33.21	450.49
Fast Food with Drive-Thru	934	TSF	22.75	21.86	44.61	17.18	15.85	33.03	467.48
Gas Station w/ Convenience Market	945	VFP	8.03	8.03	16.06	9.21	9.21	18.42	265.12

[1] Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 11th Edition (2021).

[2] TSF = thousand square feet; VFP = Vehicle Fueling Position

Internal capture is a percentage reduction that can be applied to the trip generation estimates for individual land uses to account for trips internal to the site (trips that travel between uses without leaving the site). In other words, trips may be made between the gas station use and the retail or restaurant uses proposed on-site which can be made either by walking or using internal roadways without using external streets. The internal capture is based on the National Cooperative Highway Research Program's (NCHRP Report 684) internal capture trip capture estimation tool. These internal capture worksheets are attached to the approved scoping agreement (see Appendix 1.1)

Pass-by percentages have been obtained from the ITE Trip Generation Manual (11th Edition, 2021). Pass-by trips account for trips that are currently on the existing roadway network that would stop by uses within the proposed Project on the way to their ultimate destination.

The trip generation summary illustrates daily, and peak hour trip generation estimates for the Base Development Concept are shown in Table 4-2. As shown in Table 4-2, the Base Development Concept assumes the development of a convenience store and 12 vehicle fueling position gas station on Pad A of Parcel 1. The Base Development Concept is anticipated to generate 2,910 two-way trip-ends per day with 278 AM peak hour trips and 277 PM peak hour trips.

The trip generation summary illustrates daily, and peak hour trip generation estimates for the Parcel 1 Option are shown in Table 4-3. As shown in Table 4-3, the Parcel 1 Option assumes the development of a fast-food restaurant with drive-through pad (Pad E) and retail/sit-down restaurant (Pad F) in lieu of the convenience store and 12 vehicle fueling position gas station on Parcel 1. The Parcel 1 Option is anticipated to generate 3,160 two-way trip-ends per day with 471 AM peak hour trips and 289 PM peak hour trips.

On August 18, 2025, the 12th Edition of the ITE Trip Generation Manual was released. Based on the updated rates, the Project's trip generation for both the Base Development Concept and the Parcel 1 Option are anticipated to see a nominal reduction from the trip generation produced by the ITE 11th Edition rates. To conduct a conservative analysis, the study will evaluate the Project using the ITE 11th Edition rates since the trip generation is higher.

TABLE 4-2: BASE DEVELOPMENT CONCEPT TRIP GENERATION

Preferred Project Land Uses	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Pad A: Gas Station w/Market	12	VFP	96	96	192	111	111	222	3,182
Internal Capture:			-6	-8	-14	-29	-22	-51	-732
Pass-By (76% AM; 75% PM/Daily):			-67	-67	-134	-62	-62	-124	-1,838
Market: Supermarket	43.403	TSF	73	51	124	194	194	388	4,074
Internal Capture:			-8	-10	-18	-37	-28	-65	-684
Pass-By (24% PM/Daily):			0	0	0	-40	-40	-80	-814
Shops A: Strip Retail	2.500	TSF	4	2	6	8	8	16	136
Internal Capture:			0	-1	-1	-1	0	-1	-10
Pass-By (40% PM/Daily):			0	0	0	-3	-3	-6	-52
Retail Subtotal			69	42	111	121	131	252	2,650
Shops A: Fast Food without Drive-Thru	2.500	TSF	63	45	108	42	42	84	1,126
Internal Capture:			-5	-4	-9	-12	-16	-28	-376
Pass-By (43% PM/Daily):			0	0	0	-11	-11	-22	-324
Pad D: Fast Food with Drive-Thru[2]	3.390	TSF	25	22	47	28	26	54	706
Internal Capture:			-3	-2	-5	-8	-10	-18	-236
Pass-By (50% AM; 55% PM/Daily):			-11	-11	-22	-9	-9	-18	-260
Pads B & C: Fast Food with Drive-Thru	6.000	TSF	137	131	268	103	95	198	2,806
Internal Capture:			-11	-8	-19	-30	-41	-71	-1,008
Pass-By (50% AM; 55% PM/Daily):			-63	-63	-126	-30	-30	-60	-990
Restaurant Subtotal			132	110	242	73	46	119	1,444
Credit for Existing Uses			-38	-37	-75	-45	-49	-94	-1,184
Project Total			**163**	**115**	**278**	**149**	**128**	**277**	**2,910**

[1] TSF = thousand square feet; VFP = Vehicle Fueling Position

[2] Trip generation is based on existing driveway counts as this tenant is anticipated to remain the same (in the same location).

TABLE 4-3: PARCEL 1 OPTION PROJECT TRIP GENERATION

Alternative Project Land Uses	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Market: Supermarket	43.403	TSF	73	51	124	194	194	388	4,074
Internal Capture:			-6	-7	-13	-94	-57	-151	-1,586
Pass-By (24% PM/Daily):			0	0	0	-33	-33	-66	-598
Shops A/Pad F: Strip Retail	5.200	TSF	7	5	12	17	17	34	284
Internal Capture:			0	0	0	-7	-4	-11	-92
Pass-By (40% PM/Daily):			0	0	0	-4	-4	-8	-78
Retail Subtotal			74	49	123	73	113	186	2,004
Shops A/Pad F: Fast Food without Drive-Thru	5.200	TSF	130	94	224	86	86	172	2,344
Internal Capture:			-2	-2	-4	-20	-34	-54	-736
Pass-By (43% PM/Daily):			0	0	0	-22	-22	-44	-692
Pad D: Fast Food with Drive-Thru[2]	3.390	TSF	25	22	47	28	26	54	706
Internal Capture:			-1	-1	-2	-6	-10	-16	-210
Pass-By (50% AM; 55% PM/Daily):			-12	-12	-24	-9	-9	-18	-274
Pads B, C & E: Fast Food with Drive-Thru	8.500	TSF	193	186	379	146	135	281	3,974
Internal Capture:			-4	-3	-7	-35	-57	-92	-1,302
Pass-By (50% AM; 55% PM/Daily):			-95	-95	-190	-43	-43	-86	-1,470
Restaurant Subtotal			234	189	423	125	72	197	2,340
Credit for Existing Uses			-38	-37	-75	-45	-49	-94	-1,184
Project Total			**270**	**201**	**471**	**153**	**136**	**289**	**3,160**

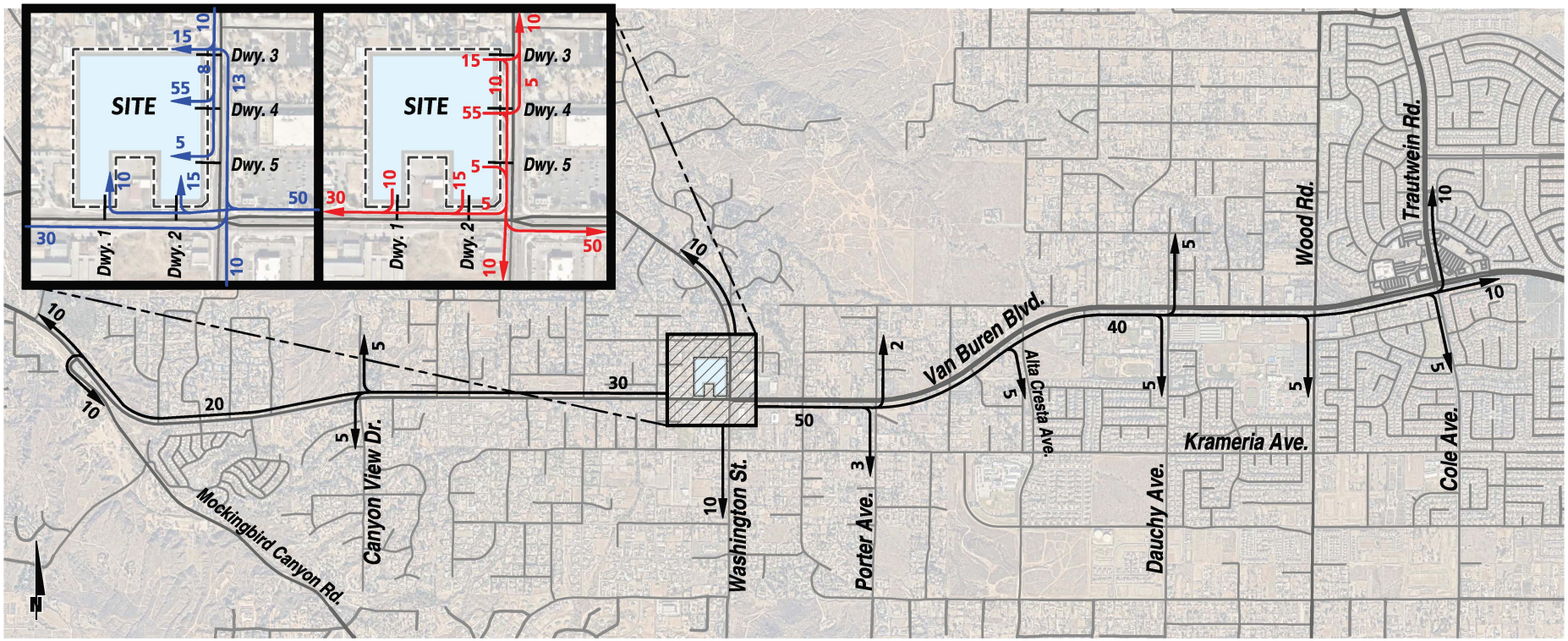
[1] TSF = thousand square feet; VFP = Vehicle Fueling Position

[2] Trip generation is based on existing driveway counts as this tenant is anticipated to remain the same (in the same location).

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations, directions, or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered, to identify the route where the Project traffic would distribute. The Project trip distributions are shown on Exhibit 4-1.

EXHIBIT 4-1 : PROJECT TRIP DISTRIBUTION



LEGEND:

10 = Percent To/From Project

= Inbound Distribution

= Outbound Distribution

4.3 MODAL SPLIT

The potential for Project trips to be reduced by the use of public transit, walking, or bicycling has not been included as part of the Project's estimated trip generation. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes would reduce the forecasted traffic volumes.

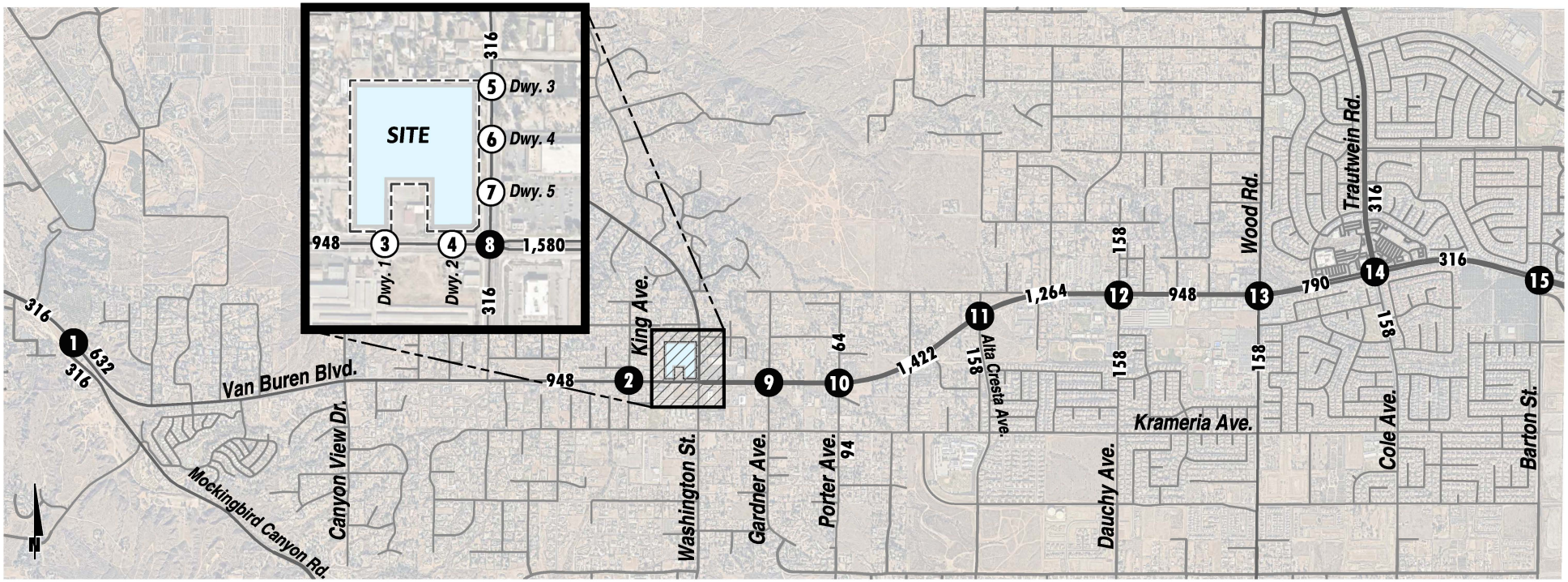
4.4 PROJECT TRIP ASSIGNMENT

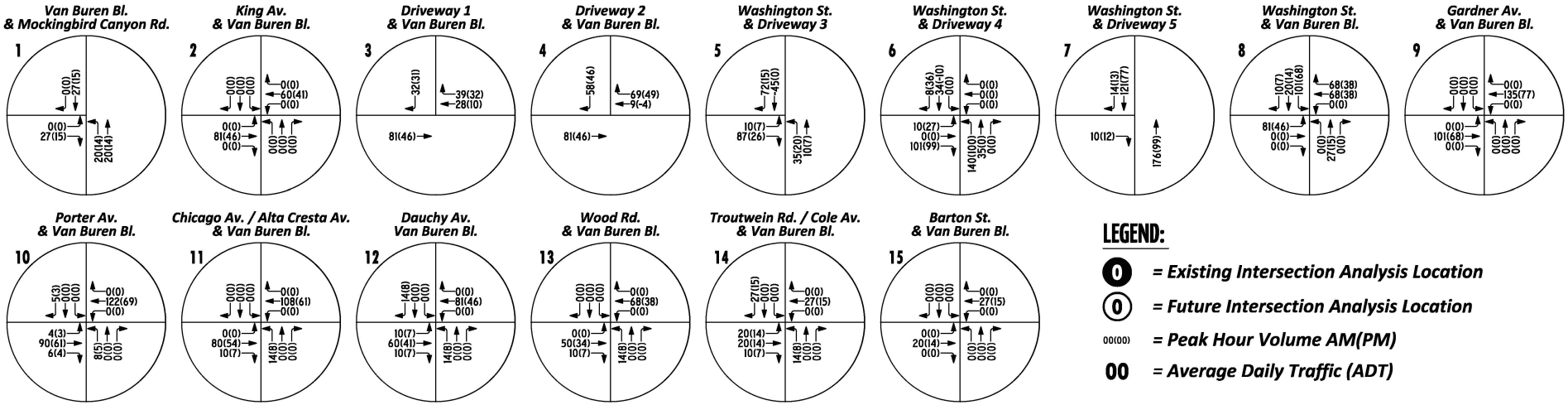
The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project weekday ADT and weekday peak hour intersection turning movement volumes are shown in Exhibit 4-2.

4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 2% per year, compounded annually for 2027 traffic conditions. The total ambient growth is 4.04% for 2027 traffic conditions. The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in conjunction with traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies. 2027 traffic volumes are provided in Section 5 of this report. The traffic generated by the proposed Project was then manually added to the base volume to determine With Project forecasts.

EXHIBIT 4-2 : PROJECT ONLY VOLUMES





LEGEND:

- (0) = Existing Intersection Analysis Location
- (0) = Future Intersection Analysis Location
- 00(00) = Peak Hour Volume AM(PM)
- 00 = Average Daily Traffic (ADT)

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the County of Riverside. The cumulative projects listed are those that would generate traffic and would contribute traffic to study area intersections. Exhibit 4-3 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown in Table 4-4. If applicable, the traffic generated by individual cumulative projects was manually added to the Without Project forecasts to ensure that traffic generated by the listed cumulative development projects in Table 4-4 are reflected as part of the background traffic. In an effort to conduct a conservative analysis, the cumulative projects are added in conjunction with the ambient growth identified in Section 4.5 *Background Traffic*. Although it is unlikely that all of these cumulative projects would be fully built and occupied by Year 2027, they have been included in an effort to conduct a conservative analysis and overstate as opposed to understate potential traffic deficiencies. Any other cumulative projects located beyond the cumulative study area that are not expected to contribute measurable traffic to study area intersections have not been included since the traffic would dissipate due to the distance from the Project site and study area intersections. Cumulative Only ADT and weekday peak hour intersection turning movement volumes are shown in Exhibit 4-4.

4.7 NEAR-TERM TRAFFIC CONDITIONS

The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast EAP (2027) and EAPC (2027) traffic conditions. An ambient growth factor accounts for background (area-wide) traffic increases that occur over time up to the year 2027 from the year 2025. Traffic volumes generated by the Project are then added to assess the near-term traffic conditions. The 2027 roadway networks are similar to the Existing conditions roadway network, with the exception of future driveways proposed to be developed by the Project.

EXHIBIT 4-3 : CUMULATIVE DEVELOPMENT LOCATION MAP

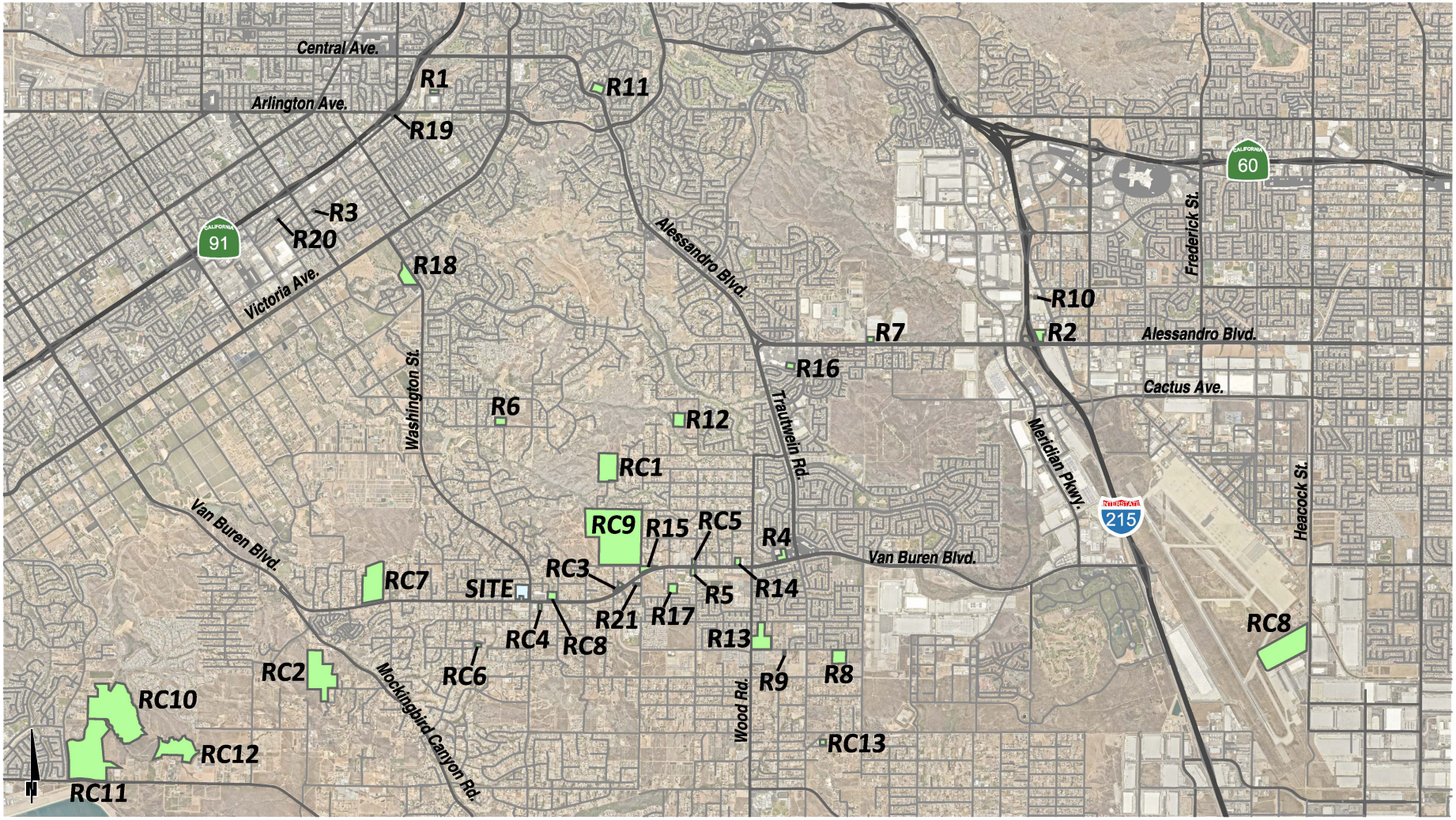
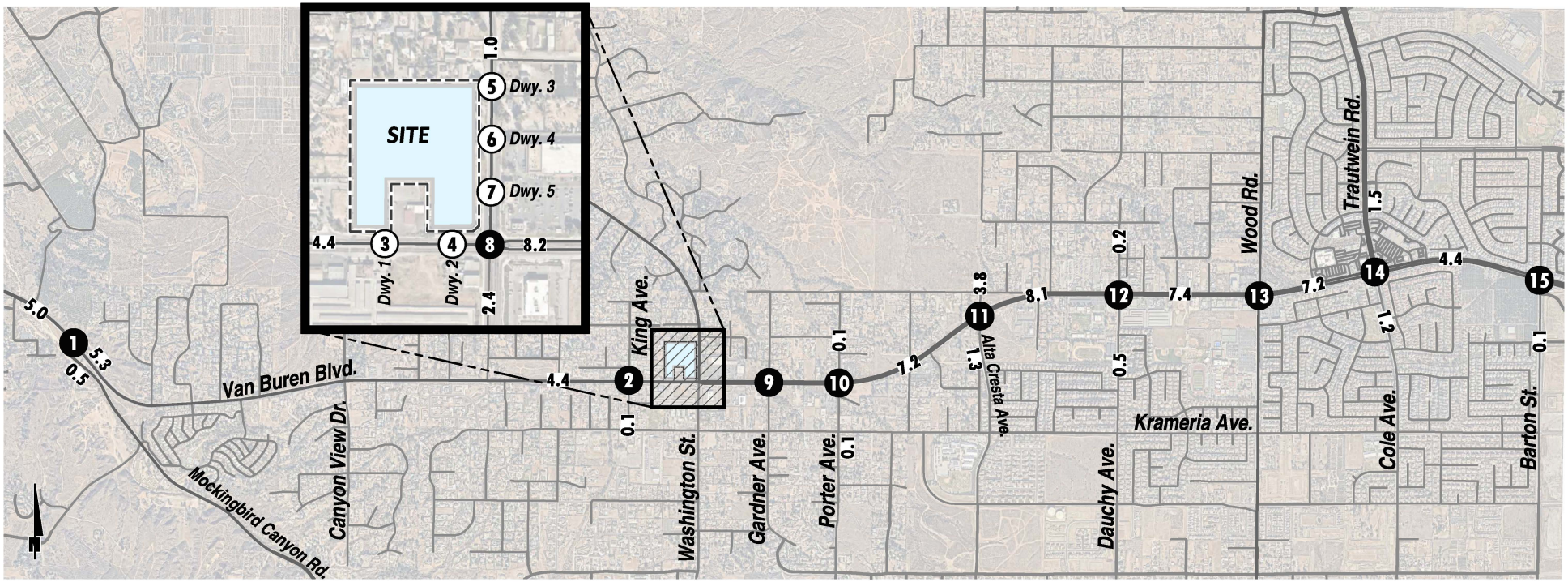


EXHIBIT 4-4 : CUMULATIVE ONLY VOLUMES



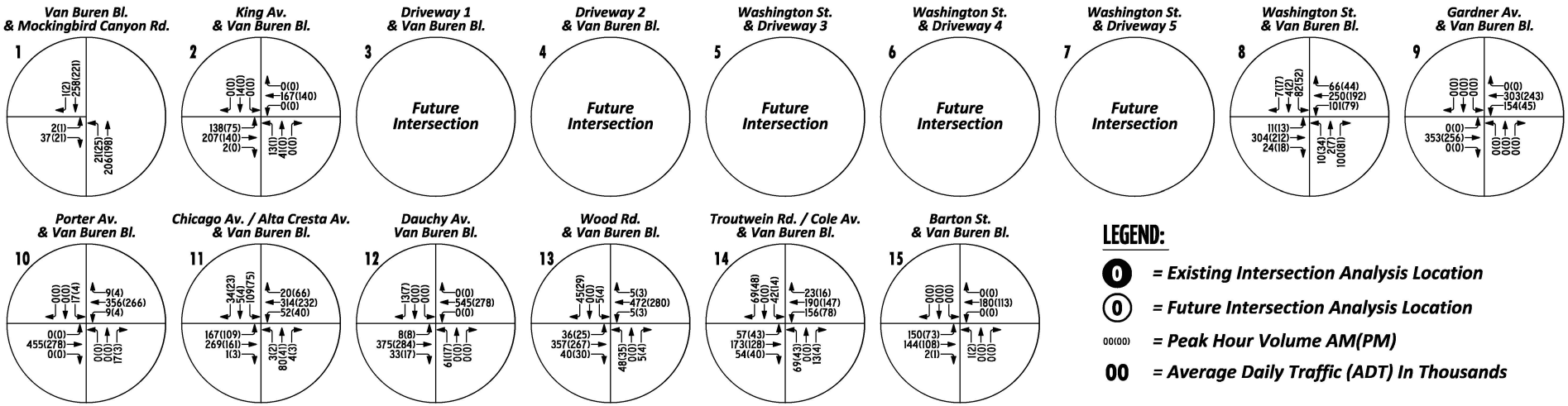


TABLE 4-4: CUMULATIVE DEVELOPMENT LAND USE SUMMARY (1 OF 2)

#	Name/Location	Land Use	Quantity	Units [1]
County of Riverside:				
RC 1	TR36763	Single Family Residential	24	DU
RC 2	TTM37665	Single Family Residential	36	DU
RC 3	PPT180002	Fast Food with Drive Thru	5.000	TSF
RC 4	Quick Quack - CUP230007	Automated Car Wash	3.596	TSF
RC 5	Dutch Bros. - PPT210010	Coffee Shop with Drive Thru	0.950	TSF
RC 6	PPT240062	Animal Shelter	45.000	TSF
RC 7	TR36813	Single Family Residential	41	DU
RC 8	Meridian D-1 Gateway Aviation Center Project	Air Freight Cargo Center	7	APP
RC 9	Arroyo Vista	Single Family Residential	231	DU
RC 10	TTM38927	Single Family Residential	230	DU
RC 11	TR36730	Single Family Residential	271	DU
RC 12	TTM39011	Single Family Residential	73	DU
RC 13	PUP250001	Church	4.000	TSF
City of Riverside:				
R1	3301 Dominion Av.	Multifamily Residential	60	DU
R2	2620 E Alessandro Bl.	Retail	15.000	TSF
		Industrial	73.200	TSF
R3	7434 Diamond St.	Church Expansion	7.078	TSF
R4	Panera Bread	Fast Food with Drive Thru	4.319	TSF
R5	18451 Van Buren Bl.	Sit Down Restaurant	4.300	TSF
		Office Space	9.920	TSF
R6	P16-0774	Single Family Residential	48	DU
R7	1006 E Alessandro Bl.	Warehouse	603.100	TSF
R8	19811 Lurin Av.	Single Family Residential	81	DU

TABLE 4-4: CUMULATIVE DEVELOPMENT LAND USE SUMMARY (2 OF 2)

#	Name/Location	Land Use	Quantity	Units [1]
R9	19331 Lurin Av.	Single Family Residential	138	DU
R10	7055 Old 215 Frontage Rd.	Warehouse	118.580	TSF
R11	Orangecrest Community Church	Church	19.905	TSF
R12	18375 Ferrari Dr.	Single Family Residential	54	DU
R13	16600 Wood Rd.	Single Family Residential	72	DU
R14	18860 Van Buren Rd.	Multifamily Residential	74	DU
R15	Arco Gas Station	Gas Station with Convenience Store	16	VFP
R16	375 E Alessandro	Multifamily Residential	347	DU
R17	18401 Van Buren Bl.	High School	1,000	STU
R18	2380 Washington St.	Agricultural Facility	12.31	AC
R19	3518 Arlington Av.	Retail	8.493	TSF
R20	7680 Casa Blanca St.	Charter School	260	STU
R21	16004 Chicago Av.	Multifamily Residential	24	DU

[1] AC = Acres; APP = Aircraft Parking Positions; DU = Dwelling Units; STU= Students; TSF = Thousand Square Feet; TUN = Tunnel; VFP = Vehicle Fueling Positions

4.7 HORIZON YEAR (2045) TRAFFIC FORECASTS

Traffic projections for Horizon Year conditions were derived from the RIVCOM regional model using accepted procedures for model forecast refinement and smoothing. The traffic forecasts reflect the area-wide growth anticipated between Existing and Horizon Year traffic conditions. The base model year for the RIVCOM regional model is Year 2019 and the future year model is Year 2045.

In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year peak hour forecasts were refined using the model derived long-range forecasts, base (validation) year model forecasts, along with existing peak hour traffic count data collected at each analysis location.

The refined future peak hour approach and departure volumes obtained from these calculations are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 765), along with initial estimates of turning movement proportions. A linear programming algorithm is used to calculate individual turning movements which match the known directional roadway segment forecast volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

Typically, the model growth is prorated and is subsequently added to the existing (base validation) traffic volumes to represent Horizon Year traffic conditions. However, review of the resulting model growth indicates negative growth for some of the study area intersections. In an effort to conduct a conservative analysis, reductions to traffic forecasts from either Existing or EAPC traffic conditions were not assumed as part of this analysis. As such, in conjunction with the addition of cumulative projects that are not consistent with the General Plan, additional growth has also been applied on a movement-by-movement basis, where applicable, to estimate reasonable Horizon Year forecasts. Horizon Year turning volumes were compared to EAPC volumes in order to ensure a minimum growth as a part of the refinement process. The minimum growth includes any additional growth between EAPC and Horizon Year traffic conditions that is not accounted for by the traffic generated by cumulative development projects and ambient growth rates assumed between Existing (2025) and Horizon Year traffic conditions. Future estimated peak hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year peak hour forecasts. The only instance when the EAPC forecasts would not be used to manually adjust the Horizon Year forecasts is if there are new proposed roadway connections/facilities that would explain the change in travel patterns within the study area.

The future Horizon Year Without Project peak hour turning movements were then reviewed by Urban Crossroads for reasonableness, and in some cases, were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes. Flow conservation checks ensure that traffic flow between two closely spaced intersections, such as two freeway ramp locations, is verified in order to make certain that vehicles leaving one intersection are entering the adjacent intersection and that there is no unexplained loss of vehicles. The result of this traffic forecasting procedure is a series of traffic volumes which are suitable for traffic operations analysis. Post processing worksheets are provided in Appendix 4.1.

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5 EAP (2027) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for EAP conditions and the resulting intersection operations, traffic signal warrant, and queuing analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAP (2027) conditions are consistent with those shown previously in Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAP conditions (e.g., intersection and roadway improvements along the Project's frontage and driveways).

5.2 EAP (2027) TRAFFIC VOLUME FORECASTS

This scenario includes Existing (2025) traffic volumes plus an ambient growth factor of 4.04% and the addition of Project traffic. The weekday AM and PM peak hour volumes which can be expected for EAP (2027) traffic conditions are shown in Exhibit 5-1.

5.3 INTERSECTION OPERATIONS ANALYSIS

EAP peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies*. The intersection analysis results are summarized in Table 5-1, which indicates that the following study area intersections are anticipated to operate at an unacceptable LOS during the peak hours under EAP (2027) traffic conditions:

- Gardner Avenue & Van Buren Boulevard (#9) – LOS F AM and PM peak hours
- Wood Road & Van Buren Boulevard (#13) – LOS D AM and PM peak hours
- Barton Street & Van Buren Boulevard (#15) – LOS D AM and PM peak hours

With the implementation of the traffic signal and associated lane improvements at Washington Street & Driveway 4 (#6) as Project design features, the intersection is anticipated to operate at an acceptable LOS during the AM and PM peak hours under EAP (2027) traffic conditions.

The intersection operations analysis worksheets for EAP traffic conditions are included in Appendix 5.1.

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

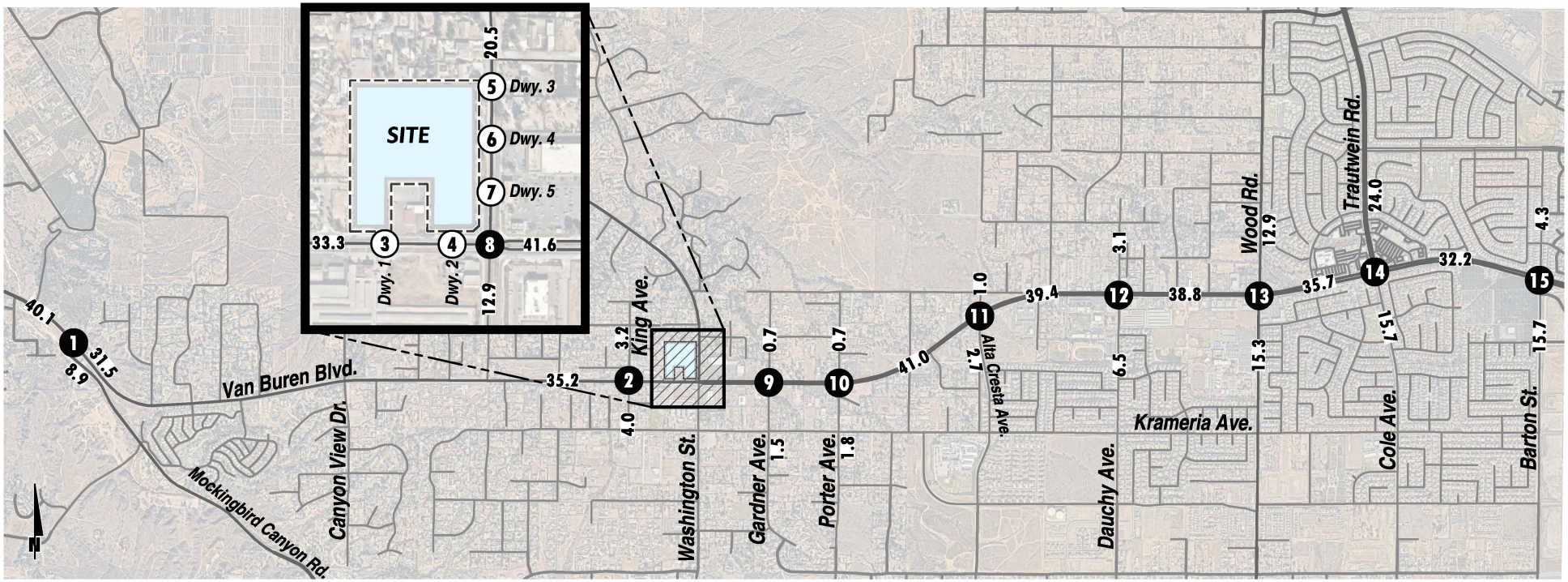
Traffic signal warrants have been performed for EAP traffic conditions based on peak hour volumes or planning level (ADT) volume-based traffic signal warrants. There are no unsignalized study area intersections that currently meet a peak hour traffic signal under EAP traffic conditions. EAP conditions traffic signal warrant analysis worksheets are provided in Appendix 5.2.

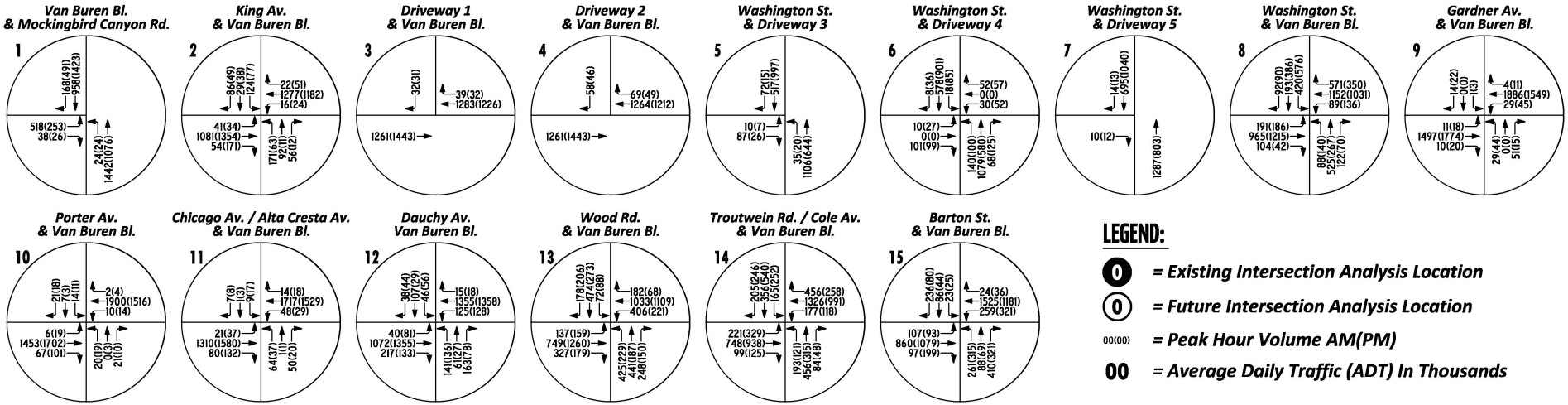
5.5 QUEUING ANALYSIS

At the request of the County, a queuing analysis has been conducted at all signalized study area intersections. With the implementation of Project improvements along Washington Street, the southbound left-turn movement at Washington Street & Van Buren Boulevard (#8) is expected to experience no queuing issues under EAP (2027) traffic conditions.

Queuing analysis results are presented in Table 5-2. Worksheets for EAP (2027) traffic conditions queuing analysis are provided in Appendix 5.3.

EXHIBIT 5-1 : EAP (2027) VOLUMES





LEGEND:

- (0) = Existing Intersection Analysis Location
- (0) = Future Intersection Analysis Location
- 00(00) = Peak Hour Volume AM(PM)
- 00 = Average Daily Traffic (ADT) In Thousands

TABLE 5-1: EAP (2027) INTERSECTION ANALYSIS

#	Intersection	Traffic Control[2]	Existing (2025)				EAP (2027)				Project-Related Delay[3]		Project-Related Traffic Deficiency?[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service				
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	Van Buren Bl. & Mockingbird Canyon Rd.	TS	10.0	7.3	B	A	11.2	8.1	B	A	--	--	No
2	King Av. & Van Buren Bl.	TS	19.6	15.8	B	B	22.5	17.0	C	B	--	--	No
3	Driveway 1 & Van Buren Bl.	CSS	Future Intersection				15.7	15.1	C	C	--	--	No
4	Driveway 2 & Van Buren Bl.	CSS	Future Intersection				16.8	15.7	C	C	--	--	No
5	Washington St. & Driveway 3	CSS	Future Intersection				20.2	26.8	C	D	--	--	No
6	Washington St. & Driveway 4	CSS/TS	**43.6**	**142.0**	**E**	**F**	33.7	41.1	C	D	--	--	No
7	Washington St. & Driveway 5	CSS	Future Intersection				11.9	14.3	B	B	--	--	No
8	Washington St. & Van Buren Bl.	TS	32.3	34.2	C	C	51.7	54.6	D	D	--	--	No
9	Gardner Av. & Van Buren Bl.	CSS	**710.1**	**2,658.4**	**F**	**F**	**1,465.6**	**4,595.7**	**F**	**F**	--	--	No
10	Porter Av. & Van Buren Bl.	TS	7.7	7.6	A	A	9.2	8.3	A	A	--	--	No
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	TS	11.8	10.9	B	B	13.7	11.9	B	B	1.9	1.0	No
12	Dauchy Av. & Van Buren Bl.	TS	20.0	21.2	C	C	22.1	24.8	C	C	2.1	3.6	No
13	Wood Rd. & Van Buren Bl.	TS	40.4	28.2	D	C	47.9	37.2	D	D	**7.5**	**9.0**	**Yes**
14	Trautwein Rd./Cole Av. & Van Buren Bl.	TS	28.0	25.7	C	C	30.7	26.9	C	C	2.7	1.2	No
15	Barton St. & Van Buren Bl.	TS	38.5	42.7	D	D	44.5	49.4	D	D	**6.0**	**6.7**	**Yes**

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

[1] Per the Highway Capacity Manual (7th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[2] TS = Traffic Signal; CSS = Cross-Street Stop

[3] Project-related delays were calculated for intersections located in the City of Riverside to identify any deficiencies resulting from the addition of Project traffic, as outlined in Table 2-4.

TABLE 5-2: EAP (2027) QUEUING SUMMARY (1 OF 3)

#	Intersection	Movement	Available Stacking Distance (Feet)	Existing (2025)				EAP (2027)			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]		Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
1	Van Buren Bl. & Mockingbird Canyon Rd.	NBL	210	11	24	Yes	Yes	39	46	Yes	Yes
		SBR	100	7	10	Yes	Yes	8	10	Yes	Yes
		EBL[3]	100	163	109	Yes	Yes	190	126	Yes	Yes
		EBL/R	100	0	0	Yes	Yes	0	0	Yes	Yes
2	King Av. & Van Buren Bl.	NBL	100	115	47	Yes	Yes	**118**	49	**No**	Yes
		SBL	85	87	55	Yes	Yes	88	57	Yes	Yes
		EBL[3]	200	61 [2]	50	Yes	Yes	65 [2]	51	Yes	Yes
		EBR	80	0	57	Yes	Yes	0	62	Yes	Yes
		WBL	175	30	39	Yes	Yes	31	40	Yes	Yes
		WBR	160	0	0	Yes	Yes	0	0	Yes	Yes
8	Washington St. & Van Buren Bl.	NBL	140	64	88	Yes	Yes	67	91	Yes	Yes
		NBR	140	36	0	Yes	Yes	17	0	Yes	Yes
		SBL	130/415	**205** [2]	**324** [2]	**No**	**No**	281 [2]	332 [2]	Yes	Yes
		SBR	190	--	--	--	--	68	55	Yes	Yes
		EBL	280	190 [2]	232 [2]	Yes	Yes	**338** [2]	**299** [2]	**No**	**No**
		WBL	300	155 [2]	236 [2]	Yes	Yes	178 [2]	244 [2]	Yes	Yes
		WBR	300	281	62	Yes	Yes	**496** [2]	70	**No**	Yes
10	Porter Av. & Van Buren Bl.	EBL	295	10	32	Yes	Yes	18	40	Yes	Yes
		EBR	130	19	36	Yes	Yes	23	41	Yes	Yes
		WBL	305	27	29	Yes	Yes	27	34	Yes	Yes
		WBR	140	0	0	Yes	Yes	0	0	Yes	Yes

TABLE 5-2: EAP (2027) QUEUING SUMMARY (2 OF 3)

#	Intersection	Movement	Available Stacking Distance (Feet)	Existing (2025)				EAP (2027)			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]		Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	NBL	95	82	56	Yes	Yes	101	68	Yes	Yes
		SBL	50	27	38	Yes	Yes	27	39	Yes	Yes
		EBL	275	46	77 [2]	Yes	Yes	47	78 [2]	Yes	Yes
		EBR	80	22	56	Yes	Yes	14	64	Yes	Yes
		WBL	295	91 [2]	57	Yes	Yes	108 [2]	58	Yes	Yes
12	Dauchy Av. & Van Buren Bl.	NBL[3]	60	98	88	Yes	Yes	112	97	Yes	Yes
		SBL	75	43	45	Yes	Yes	45	46	Yes	Yes
		SBR	50	0	0	Yes	Yes	0	0	Yes	Yes
		EBL	295	51	128 [2]	Yes	Yes	71 [2]	147 [2]	Yes	Yes
		EBR	95	100	40	Yes	Yes	112	48	Yes	Yes
		WBL	420	180 [2]	206 [2]	Yes	Yes	201 [2]	216 [2]	Yes	Yes
		WBR	160	0	0	Yes	Yes	0	0	Yes	Yes
13	Wood Rd. & Van Buren Bl.	NBL	485	261 [2]	128	Yes	Yes	292 [2]	136	Yes	Yes
		SBL[3]	80	112	146 [2]	Yes	Yes	135 [2]	166 [2]	Yes	Yes
		EBL	400	222 [2]	221 [2]	Yes	Yes	246 [2]	244 [2]	Yes	Yes
		EBR	300	183	31	Yes	Yes	197	41	Yes	Yes
		WBL	350	246 [2]	143 [2]	Yes	Yes	256 [2]	158 [2]	Yes	Yes
		WBR	235	58	0	Yes	Yes	64	0	Yes	Yes

TABLE 5-2: EAP (2027) QUEUING SUMMARY (3 OF 3)

#	Intersection	Movement	Available Stacking Distance (Feet)	Existing (2025)				EAP (2027)			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]		Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
14	Trautwein Rd./Cole Av. & Van Buren Bl.	NBL	200	**278** [2]	163 [2]	**No**	Yes	**313** [2]	190 [2]	**No**	Yes
		SBL	250	99	135	Yes	Yes	102	141	Yes	Yes
		SBR	200	86	116	Yes	Yes	110	128	Yes	Yes
		EBL	150	146 [2]	**177** [2]	Yes	**No**	**167** [2]	**192** [2]	**No**	**No**
		EBR	200	15	33	Yes	Yes	23	34	Yes	Yes
		WBL	160	**275** [2]	169 [2]	**No**	Yes	**295** [2]	**190** [2]	**No**	**No**
		WBR	180	**285**	49	**No**	Yes	**326**	57	**No**	Yes
15	Barton St. & Van Buren Bl.	NBL[3]	150	171 [2]	172	Yes	Yes	175 [2]	176	Yes	Yes
		NBR	145	139	73	Yes	Yes	161	100	Yes	Yes
		SBL	125	49	51	Yes	Yes	52	52	Yes	Yes
		EBL	400	196 [2]	128	Yes	Yes	203 [2]	140 [2]	Yes	Yes
		WBL	190	**392** [2]	**509** [2]	**No**	**No**	**413** [2]	**535** [2]	**No**	**No**

***BOLD** = 95th percentile queue exceeds the available storage; Underline = Project improvement

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided for the 95th queue only. An additional 25 feet of stacking is assumed to be provided within the transition for turn pockets, where applicable, in determining whether storage requirement is met.

[2] 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

[3] The existing painted median provides adequate storage to accommodate periodic 95th percentile queues.

5.6 DEFICIENCIES AND IMPROVEMENTS

5.6.1 Intersections

Improvement strategies to address EAP (2027) traffic deficiencies are presented in Table 5-3. For intersections within the County of Riverside, improvement strategies have been recommended at intersections identified as deficient under EAP (2027) traffic conditions in an effort to achieve an acceptable LOS (i.e., LOS D or better). For intersections within the City of Riverside, the recommended improvement strategies to address EAP (2027) traffic deficiencies presented in Table 5-3 reduce the Project-related delay to less than 5.0 seconds. Worksheets for EAP (2027), with improvements, are provided in Appendix 5.4.

5.6.2 Queues

Improvements to address queuing deficiencies have bene identified where feasible and are shown in Table 5-4. Worksheets for EAP (2027) traffic conditions queues with the recommended intersection improvements from Table 5-3 are provided in Appendix 5.5.

Improvements have not been identified at the following movements, as improvements are not considered feasible due to physical constraints on the existing roadways as noted:

- Washington Street & Van Buren Boulevard (#8), Westbound right-turn lane: the existing westbound right-turn lane extends to the right-in/right-out driveway serving the shopping center on the northeast corner. Under EAP (2030) With Improvements conditions, the westbound right-turn queues are projected to extend beyond the driveway despite the recommended improvements identified in Table 5-4. However, queues are not anticipated to extend beyond the upstream signalized driveway. Therefore, it is recommended that the Project provide "Keep Clear" striping across the right-in/right-out driveway on Van Buren Boulevard to maintain driveway access when queues periodically exceed the available storage length.
- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14), Westbound left-turn lane: improvement may not be feasible to modify the existing landscaped median to lengthen the westbound left turn storage without impacting the required reverse curve and/or the storage for the eastbound left turn pocket at the upstream driveway into the existing Albertson's shopping center. This queuing issue is consistent with Existing conditions.

TABLE 5-3: EAP (2027) INTERSECTION OPERATIONS ANALYSIS WITH IMPROVEMENTS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
8	Washington St. & Van Buren Bl.																	
	Without Improvements:	TS	2	2	1	2	2	**1**	1	2	0	1	2	1	51.7	54.6	D	D
	With Improvements:	TS	2	2	1	2	2	**1**	1	2	0	1	2	**1>**	47.8	52.2	D	D
9	Gardner Av. & Van Buren Bl.																	
	Without Improvements:	CSS	0	1	0	0	1	0	1	2	0	1	2	0	**1,465.6**	**4,595.7**	**F**	**F**
	With Improvements:	**TS**	0	1	0	0	1	0	1	2	0	1	2	0	13.8	13.5	B	B
13	Wood Rd. & Van Buren Bl.																	
	Existing (2025):	TS	2	2	0	1	2	0	1	2	1	2	2	1	40.4	28.2	D	C
	With Project, With Improvements:	TS	2	2	**1>**	1	2	0	1	**3**	**0**	2	2	1	43.7	32.7	D	C
15	Barton St. & Van Buren Bl.																	
	Existing (2025):	TS	2	1	1	1	1	0	1	2	0	1	3	0	38.5	42.7	D	D
	With Project, With Improvements:	TS	2	1	1	1	1	0	1	2	**1**	1	3	0	39.3	35.1	D	D

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

[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; >> = Free-Right Turn Lane; > = Right-Turn Overlap Phasing; **1** = Improvement

[2] Per the Highway Capacity Manual 7th Edition, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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

TABLE 5-4: EAP (2027) QUEUING SUMMARY WITH IMPROVEMENTS

#	Intersection	Movement	Available Stacking Distance (Feet)	EAP (2027)			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM
2	King Av. & Van Buren Bl.	NBL	125	118	49	Yes	Yes
8	Washington St. & Van Buren Bl. [3]	NBL	140	65	91	Yes	Yes
		NBR	140	17	0	Yes	Yes
		SBL	415	231	332 [2]	Yes	Yes
		SBR	190	68	46	Yes	Yes
		EBL	280	254 [2]	224	Yes	Yes
		WBL	300	178 [2]	244 [2]	Yes	Yes
		WBR	300	**488** [2]	95	**No**	Yes
14	Trautwein Rd./Cole Av. & Van Buren Bl.	NBL	325	313 [2]	190 [2]	Yes	Yes
		EBL	200	167 [2]	192 [2]	Yes	Yes
		WBR	325	326	57	Yes	Yes
15	Barton St. & Van Buren Bl.	EBR	100	0	71	Yes	Yes
		WBL	525	403 [2]	506 [2]	Yes	Yes

***BOLD** = 95th percentile queue exceeds the available storage; Underline = Improvement

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided for the 95th queue only. An additional 25 feet of stacking is assumed to be provided within the transition for turn pockets, where applicable, in determining whether storage requirement is met.

[2] 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

[3] Improvements at Washington St. & Van Buren Bl. (#8) include modifying the traffic signal to increase the green time for the eastbound left-turn movement and implementing overlap phasing for the westbound right-turn approach.

6 EAPC (2027) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for EAPC (2027) conditions and the resulting intersection operations, traffic signal warrant, and queuing analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAPC (2027) conditions are consistent with those shown previously in Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC (2027) conditions (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- If applicable, driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAPC (2027) conditions (e.g., intersection and roadway improvements along the cumulative development's frontages) .

6.2 BACKGROUND PLUS PROJECT PLUS CUMULATIVE PROJECTS TRAFFIC VOLUME FORECASTS

This scenario includes Existing (2025) traffic volumes plus an ambient growth factor of 4.04%, the addition of traffic generated by known cumulative development projects, and the addition of Project traffic. The weekday ADT and weekday peak hour intersection turning movement volumes which can be expected for EAPC (2027) traffic conditions are shown in Exhibit 6-1.

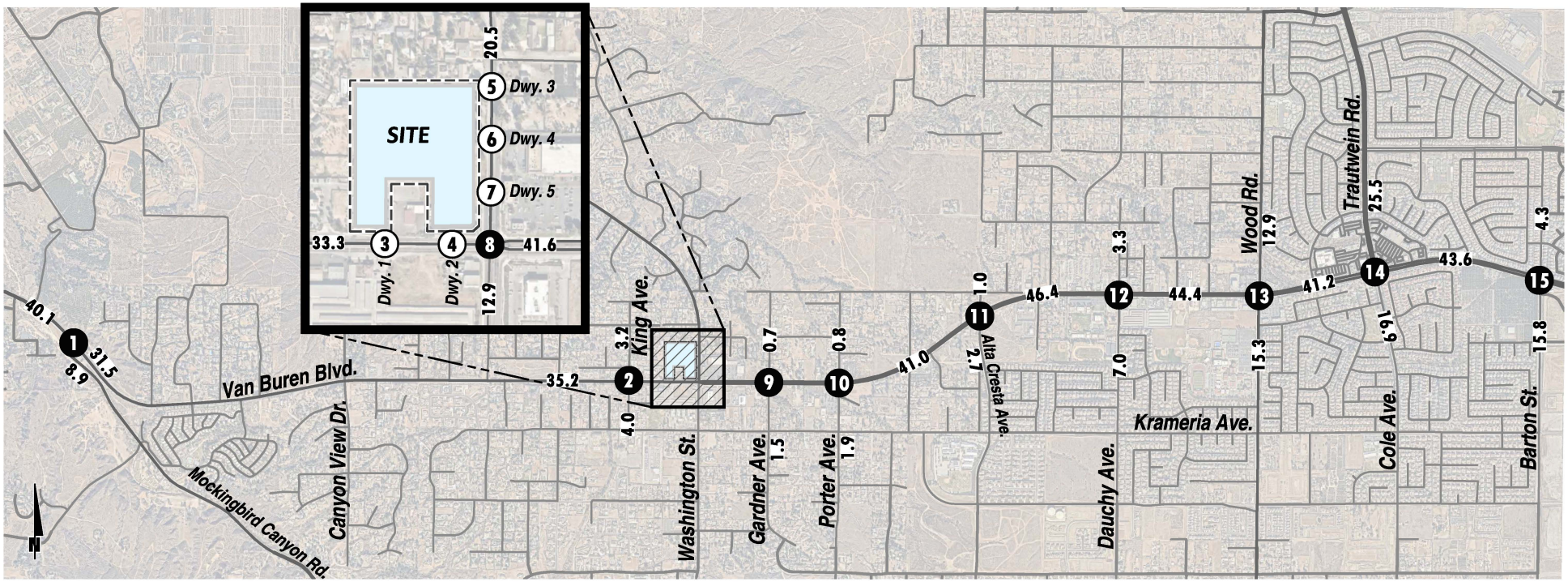
6.3 INTERSECTION OPERATIONS ANALYSIS

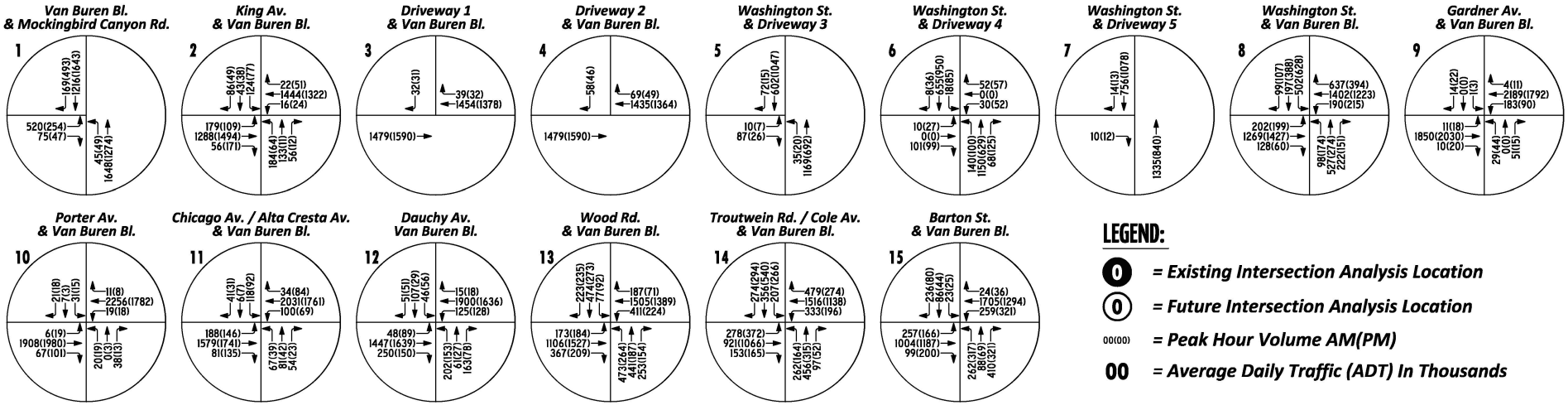
EAPC (2027) peak hour traffic operations have been evaluated for the study area intersection based on the analysis methodologies presented in Section 2 *Methodologies*. The intersection analysis results are summarized in Table 6-1 for EAPC (2027) traffic conditions, which indicates that the following study area intersection is anticipated to operate at an unacceptable LOS during the peak hours:

- Washington Street & Van Buren Boulevard (#8) – LOS F AM peak hour; LOS E PM peak hour
- Gardner Avenue & Van Buren Boulevard (#9) – LOS F AM and PM peak hours
- Chicago Avenue / Alta Cresta Avenue & Van Buren Boulevard (#11) – LOS E AM peak hour only
- Dauchy Avenue & Van Buren Boulevard (#12) – LOS E AM peak hour only
- Wood Road & Van Buren Boulevard (#13) – LOS F AM peak hour only

The intersection operations analysis worksheets for EAPC (2027) traffic conditions are included in Appendix 6.1.

EXHIBIT 6-1 : EAPC (2027) VOLUMES





LEGEND:

- **0** = Existing Intersection Analysis Location
- **(0)** = Future Intersection Analysis Location
- 00(00) = Peak Hour Volume AM(PM)
- **00** = Average Daily Traffic (ADT) In Thousands

TABLE 6-1: EAPC (2027) INTERSECTION ANALYSIS

#	Intersection	Traffic Control[2]	EAPC (2027)			
			Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM
1	Van Buren Bl. & Mockingbird Canyon Rd.	TS	13.4	9.4	B	A
2	King Av. & Van Buren Bl.	TS	55.0	21.7	D	C
3	Driveway 1 & Van Buren Bl.	CSS	17.5	16.6	C	C
4	Driveway 2 & Van Buren Bl.	CSS	19.0	17.4	C	C
5	Washington St. & Driveway 3	CSS	24.6	29.7	C	D
6	Washington St. & Driveway 4	TS	44.3	43.0	D	D
7	Washington St. & Driveway 5	CSS	12.3	14.6	B	B
8	Washington St. & Van Buren Bl.	TS	**82.9**	**60.8**	**F**	**E**
9	Gardner Av. & Van Buren Bl.	CSS	**23,240.9**	**17,958.5**	**F**	**F**
10	Porter Av. & Van Buren Bl.	TS	18.0	10.6	B	B
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	TS	**62.7**	27.9	**E**	C
12	Dauchy Av. & Van Buren Bl.	TS	**56.3**	50.6	**E**	D
13	Wood Rd. & Van Buren Bl.	TS	**87.4**	50.2	**F**	D
14	Trautwein Rd./Cole Av. & Van Buren Bl.	TS	51.0	36.4	D	D
15	Barton St. & Van Buren Bl.	TS	54.7	54.8	D	D

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

[1] Per the Highway Capacity Manual (7th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[2] TS = Traffic Signal; CSS = Cross-Street Stop

6.4 TRAFFIC SIGNAL WARRANT ANALYSIS

The traffic signal warrant analysis for EAPC (2027) traffic conditions are based on the peak hour volumes or planning level ADT volume-based traffic signal warrants. There are no study area intersections anticipated to meet a traffic signal warrant under EAPC (2027) traffic conditions (see Appendix 6.2).

6.5 QUEUING ANALYSIS

At the request of the County, a queuing analysis has been conducted at all signalized study area intersections. With the implementation of Project improvements along Washington Street, the southbound left-turn movement at Washington Street & Van Buren Boulevard (#8) is expected to experience no queuing issues under EAPC (2027) traffic conditions. Queuing analysis results are presented in Table 6-2. Worksheets for EAPC (2027) traffic conditions queuing analysis are provided in Appendix 6.3.

TABLE 6-2: EAPC (2027) QUEUING SUMMARY (1 OF 2)

#	Intersection	Movement	Available Stacking Distance (Feet)	EAPC (2027) Synchro: 95th Percentile Queue (Feet) AM Peak Hour	EAPC (2027) Synchro: 95th Percentile Queue (Feet) PM Peak Hour	Acceptable?[1] AM	Acceptable?[1] PM
1	Van Buren Bl. & Mockingbird Canyon Rd.	NBL	210	69	91 [2]	Yes	Yes
		SBR	100	7	28	Yes	Yes
		EBL[3]	100	252	147	Yes	Yes
		EBL/R	100	0	0	Yes	Yes
2	King Av. & Van Buren Bl.	NBL	100	**128**	49	**No**	Yes
		SBL	85	88	57	Yes	Yes
		EBL[3]	200	286 [2]	181 [2]	Yes	Yes
		EBR	80	0	62	Yes	Yes
		WBL	175	31	40	Yes	Yes
		WBR	160	0	0	Yes	Yes
8	Washington St. & Van Buren Bl.	NBL	140	72	108	Yes	Yes
		NBR	140	101	52	Yes	Yes
		SBL	415	333 [2]	348 [2]	Yes	Yes
		SBR	190	71	68	Yes	Yes
		EBL	280	**385** [2]	**317** [2]	**No**	**No**
		WBL	300	**361** [2]	**352** [2]	**No**	**No**
		WBR	300	**629** [2]	142	**No**	Yes
10	Porter Av. & Van Buren Bl.	EBL	295	18	40	Yes	Yes
		EBR	130	23	4	Yes	Yes
		WBL	305	40	39	Yes	Yes
		WBR	140	0	0	Yes	Yes
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	NBL	95	104	70	**No**	Yes
		SBL	50	**261** [2]	**201** [2]	**No**	**No**
		EBL	275	**373** [2]	**293** [2]	**No**	**No**
		EBR	80	15	68	Yes	Yes
		WBL	295	222 [2]	159 [2]	Yes	Yes
12	Dauchy Av. & Van Buren Bl.	NBL[3]	60	155	110	Yes	Yes
		SBL	75	44	47	Yes	Yes
		SBR	50	0	0	Yes	Yes
		EBL	295	90 [2]	164 [2]	Yes	Yes
		EBR	95	**133**	58	**No**	Yes
		WBL	420	227 [2]	218 [2]	Yes	Yes
		WBR	160	0	0	Yes	Yes

TABLE 6-2: EAPC (2027) QUEUING SUMMARY (2 OF 2)

#	Intersection	Movement	Available Stacking Distance (Feet)	EAPC (2027) Synchro: 95th Percentile Queue (Feet) AM Peak Hour	EAPC (2027) Synchro: 95th Percentile Queue (Feet) PM Peak Hour	EAPC (2027) Acceptable?[1] AM	EAPC (2027) Acceptable?[1] PM
13	Wood Rd. & Van Buren Bl.	NBL	485	378 [2]	152	Yes	Yes
		SBL[3]	80	181 [2]	188 [2]	Yes	Yes
		EBL	400	336 [2]	309 [2]	Yes	Yes
		EBR	300	209	59	Yes	Yes
		WBL	350	306 [2]	179 [2]	Yes	Yes
		WBR	235	84	0	Yes	Yes
14	Trautwein Rd./Cole Av. & Van Buren Bl.	NBL	200	**502** [2]	**286** [2]	**No**	**No**
		SBL	250	126	148	Yes	Yes
		SBR	200	169	163	Yes	Yes
		EBL	150	**246** [2]	**242** [2]	**No**	**No**
		EBR	200	41	58	Yes	Yes
		WBL	160	**605** [2]	**323** [2]	**No**	**No**
		WBR	180	**333**	74	**No**	Yes
15	Barton St. & Van Buren Bl.	NBL[3]	150	176 [2]	177	Yes	Yes
		NBR	145	163	86	Yes	Yes
		SBL	125	52	52	Yes	Yes
		EBL	400	**447** [2]	266 [2]	**No**	Yes
		WBL	190	**452** [2]	**547** [2]	**No**	**No**

***BOLD** = 95th percentile queue exceeds the available storage; Underline = Project improvement

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided for the 95th queue only. An additional 25 feet of stacking is assumed to be provided within the transition for turn pockets, where applicable, in determining whether storage requirement is met.

[2] 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

[3] The existing painted median provides adequate storage to accommodate periodic 95th percentile queues.

6.6 DEFICIENCIES AND IMPROVEMENTS

6.6.1 Intersections

Improvement strategies have been recommended at intersections that have been identified as deficient under EAPC (2027) traffic conditions in an effort to achieve an acceptable LOS. The effectiveness of the recommended improvement strategies to address EAPC (2027) traffic deficiencies are presented in Table 6-3. Worksheets for EAPC (2027), with Improvements, are provided in Appendix 6.5.

TABLE 6-3: EAPC (2027) INTERSECTION ANALYSIS WITH IMPROVEMENTS

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
8	Washington St. & Van Buren Bl.																	
	Without Improvements:	TS	2	2	1	2	2	**1**	1	2	0	1	2	1	**82.9**	**60.8**	**F**	**E**
	With Improvements:	TS	2	2	1	2	2	**1**	1	**3**	0	1	**3**	**1>**	49.8	50.8	D	D
9	Gardner Av. & Van Buren Bl.																	
	Without Improvements:	CSS	0	1	0	0	1	0	1	2	0	1	2	0	**23,240.9**	**17,958.5**	**F**	**F**
	With Improvements:	**TS**	0	1	0	0	1	0	1	2	0	1	2	0	20.1	25.6	C	C
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.																	
	Without Improvements:	TS	1	1	0	1	1	0	1	2	1	1	2	0	**62.7**	27.9	**E**	C
	With Improvements:	TS	1	1	0	1	1	0	1	2	1	1	**3**	0	27.8	18.5	C	B
12	Dauchy Av. & Van Buren Bl.																	
	Without Improvements:	TS	1	1	0	1	1	1	1	2	1	1	2	1	**56.3**	50.6	**E**	D
	With Improvements:	TS	1	1	0	1	1	1	1	2	1	1	**3**	1	26.7	37.9	C	D
13	Wood Rd. & Van Buren Bl.																	
	Without Improvements:	TS	2	2	0	1	2	0	1	2	1	2	2	1	**87.4**	50.2	**F**	D
	With Improvements:	TS	2	2	**1>**	1	2	0	1	**3**	**1**	2	**3**	1	53.2	33.0	D	C

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

[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; >> = Free-Right Turn Lane; > = Right-Turn Overlap Phasing; **1** = Improvement

[2] Per the Highway Capacity Manual 7th Edition, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

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

6.6.2 Queues

Improvements to address queuing deficiencies have bene identified where feasible and are shown in Table 6-4. Worksheets for EAPC (2027) traffic conditions queues with the recommended intersection improvements from Table 6-3 are provided in Appendix 6.5.

Improvements have not been identified at the following movements, as improvements are not considered feasible due to physical constraints on the existing roadways as noted:

- Washington Street & Van Buren Boulevard (#8), Westbound right-turn lane: the existing westbound right turn lane already extends back to the first existing right-in/right-out driveway to the east for the shopping center on the northeast corner. Under EAPC (2030) With Improvements conditions, the westbound right-turn queues are projected to extend beyond the driveway despite the recommended improvements identified in Table 6-4. Therefore, it is recommended that the Project provides "Keep Clear" striping across the right-in/right-out driveway on Van Buren Boulevard to maintain driveway access when queues periodically exceed the available storage length.
- Chicago Avenue / Alta Cresta Avenue & Van Buren Boulevard (#11), Southbound left-turn lane: extending the southbound left turn pocket beyond the existing 50-feet would extend beyond/block the existing driveway north of Van Buren Boulevard.
- Chicago Avenue / Alta Cresta Avenue & Van Buren Boulevard (#11), Eastbound left-turn lane: extending the eastbound left turn pocket beyond the existing 275-feet would modifications to the existing raised median and affecting the storage length for the westbound left-turn pocket at the existing driveway immediately to the west.
- Dauchy Avenue & Van Buren Boulevard (#12), Eastbound right-turn lane: extending the eastbound right turn pocket beyond the existing 95-feet is not feasible as it already extends back to the driveway of the restaurant on the southwest corner of the intersection.
- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14), Northbound left-turn lane: although the striped turn pocket for the northbound left-turn pocket accommodates only 200-feet of storage, 410-feet of storage can be accommodated before blocking the intersection of Cole Avenue and Bergamont Drive. No additional improvements are recommended.
- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14), Westbound left-turn lane: improvement may not be feasible to modify the existing landscaped median to lengthen the westbound left turn storage without impacting the required reverse curve and/or the storage for the eastbound left turn pocket at the upstream driveway into the existing Albertson's shopping center. This queuing issue is consistent with Existing conditions
- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14), Westbound right-turn lane: although an improvement is shown in Table 6-4 with 325-feet of storage, extending beyond this distance is not feasible without acquiring additional right-of-way and impacting existing Class II bike lanes and sidewalk and landscaping for the existing Alberton's shopping center. This queuing issue is consistent with Existing conditions.

TABLE 6-4: EAPC (2027) QUEUING SUMMARY WITH IMPROVEMENTS

#	Intersection	Movement	Available Stacking Distance (Feet)	EAPC (2027)			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM
2	King Av. & Van Buren Bl.	NBL	150	128	49	Yes	Yes
8	Washington St. & Van Buren Bl. [3]	NBL	140	72	108	Yes	Yes
		NBR	140	79	34	Yes	Yes
		SBL	415	280 [2]	348 [2]	Yes	Yes
		SBR	190	66	59	Yes	Yes
		EBL	280	265 [2]	236	Yes	Yes
		WBL	350	317 [2]	352 [2]	Yes	Yes
		WBR	300	**630** [2]	88	**No**	Yes
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	NBL	125	104	70	Yes	Yes
14	Trautwein Rd./Cole Av. & Van Buren Bl.	NBL	410	**502** [2]	286 [2]	**No**	Yes
		EBL	250	246 [2]	242 [2]	Yes	Yes
		WBR	325	**333**	74	**No**	Yes
15	Barton St. & Van Buren Bl.	EBL	450	447 [2]	266 [2]	Yes	Yes
		WBL	550	452 [2]	547 [2]	Yes	Yes

***BOLD** = 95th percentile queue exceeds the available storage; Underline = Improvement

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided for the 95th queue only. An additional 25 feet of stacking is assumed to be provided within the transition for turn pockets, where applicable, in determining whether storage requirement is met.

[2] 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

[3] Improvements at Washington St. & Van Buren Bl. (#8) include modifying the traffic signal to increase the green time for the eastbound left-turn movement and implementing overlap phasing for the westbound right-turn approach.

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7 HORIZON YEAR (2045) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Horizon Year (2045) conditions and the resulting intersection operations, traffic signal warrant, and queuing analyses

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Horizon Year (2045) conditions are consistent with those shown previously in Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year conditions (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- If applicable, driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Horizon Year conditions.

7.2 HORIZON YEAR (2045) TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-process volumes obtained from the RIVCOM, plus the traffic generated by the proposed Project for With Project conditions only. The weekday ADT and weekday AM and PM peak hour volumes, in actual vehicles, which can be expected for Horizon Year (2045) Without and With Project traffic conditions are shown in Exhibits 7-1 and 7-2, respectively.

7.3 INTERSECTION OPERATIONS ANALYSIS

Horizon Year (2045) conditions peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 7-1 for Horizon Year (2045) conditions which indicates the following study area intersections are anticipated to operate at an unacceptable LOS under Horizon Year (2045) Without Project traffic conditions:

- King Avenue & Van Buren Boulevard (#2) – LOS F AM peak hour only
- Washington Street & Driveway 4 (#6) – LOS F AM and PM peak hours
- Washington Street & Van Buren Boulevard (#8) – LOS F AM and PM peak hours
- Gardner Avenue & Van Buren Boulevard (#9) – LOS F AM and PM peak hours
- Chicago Avenue / Alta Cresta Avenue & Van Buren Boulevard (#11) – LOS F AM peak hour only
- Dauchy Avenue & Van Buren Boulevard (#12) – LOS E AM and PM peak hours
- Wood Road & Van Buren Boulevard (#13) – LOS F AM peak hour; LOS E PM peak hour
- Barton Street & Van Buren Boulevard (#15) – LOS F AM and PM peak hours

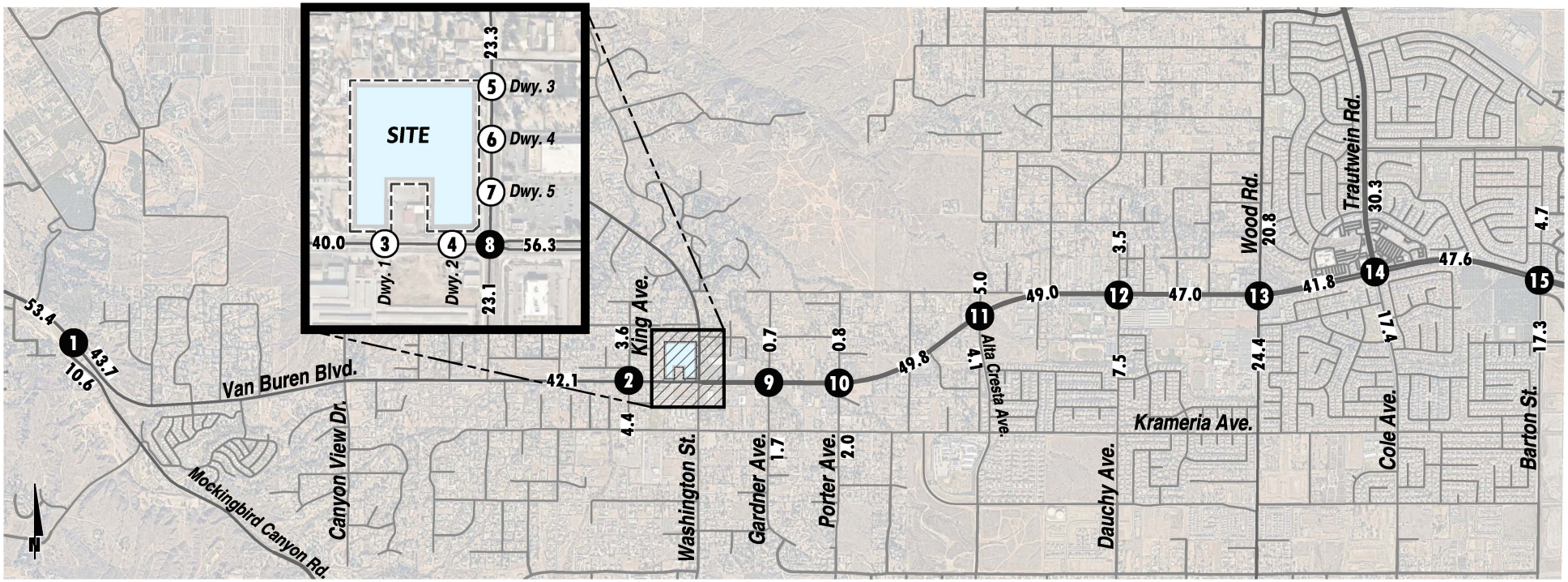
With the addition of Project traffic, the following intersections are anticipated to degrade from LOS E to LOS F under Horizon Year (2045) With Project traffic conditions:

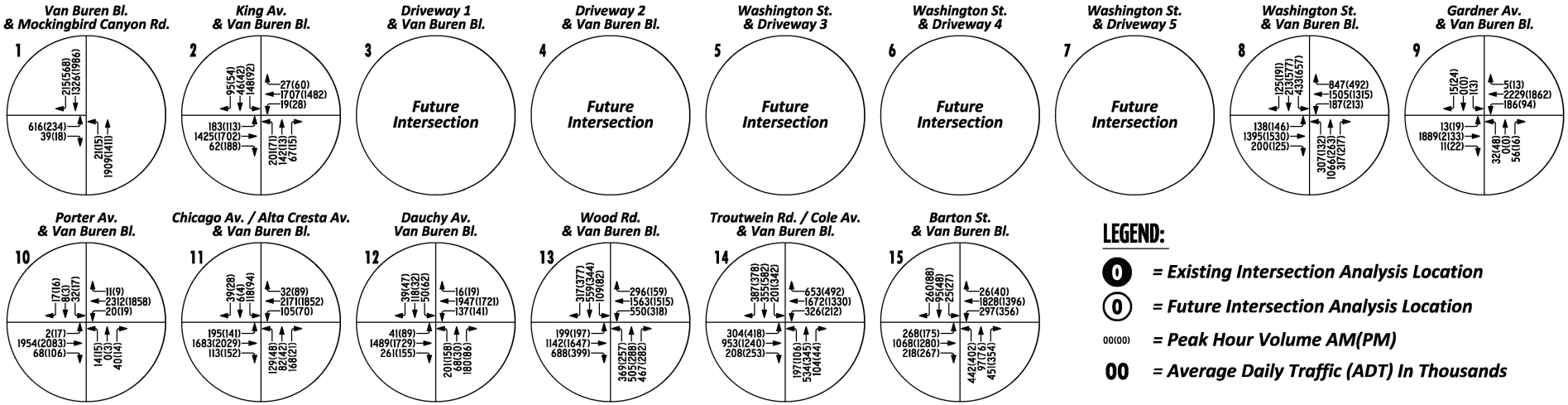
- Dauchy Avenue & Van Buren Boulevard (#12) – LOS F PM peak hour only
- Wood Rd. & Van Buren Boulevard (#13) – LOS F PM peak hour only

With the implementation of the traffic signal and associated lane improvements at Washington Street & Driveway 4 (#6) as Project design features, intersection operations are anticipated to improve under Horizon Year (2045) With Project traffic conditions. The intersection operations

analysis worksheets for Horizon Year (2045) Without and With Project traffic conditions are included in Appendices 7.1 and 7.2, respectively.

EXHIBIT 7-1 : HORIZON YEAR (2045) WITHOUT PROJECT VOLUMES

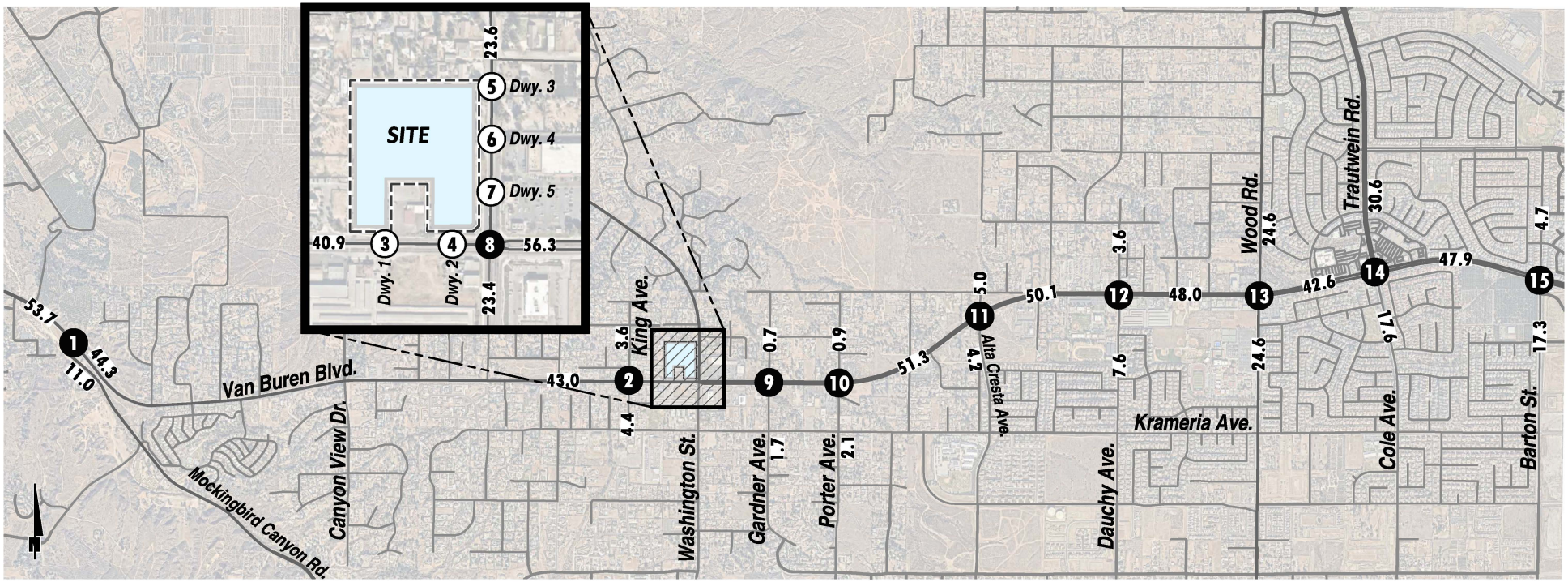




LEGEND:

- **0** = Existing Intersection Analysis Location
- (0) = Future Intersection Analysis Location
- 00(00) = Peak Hour Volume AM(PM)
- **00** = Average Daily Traffic (ADT) In Thousands

EXHIBIT 7-2 : HORIZON YEAR (2045) WITH PROJECT VOLUMES



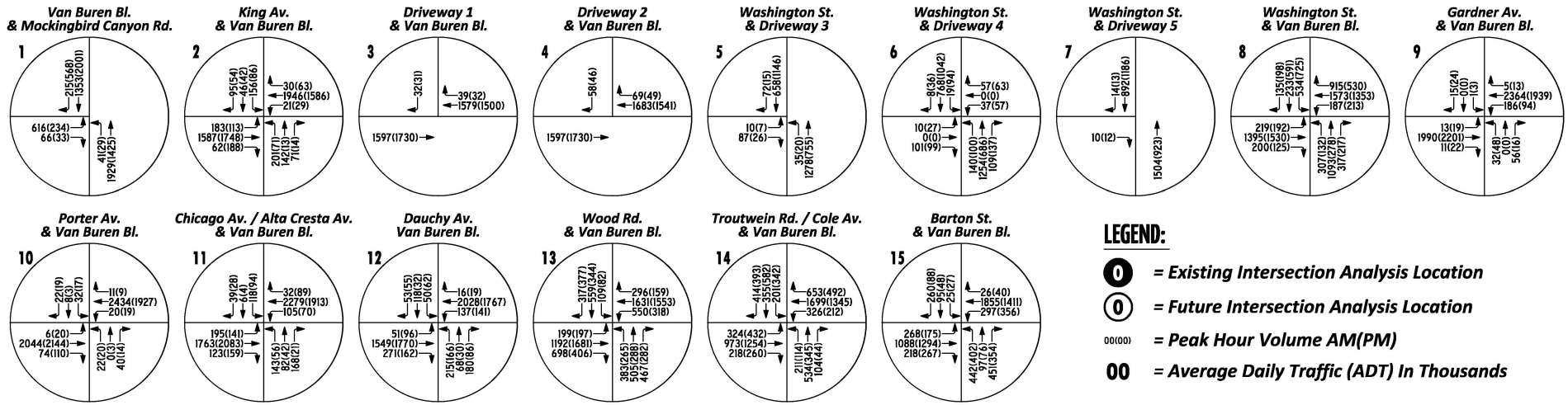


TABLE 7-1: HORIZON YEAR (2045) INTERSECTION ANALYSIS

#	Intersection	Traffic Control[2]	HY (2045) NP				HY (2045) WP				Project-Related Delay[3]		Project-Related Traffic Deficiency?[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service				
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
1	Van Buren Bl. & Mockingbird Canyon Rd.	TS	16.8	9.1	B	A	18.1	10.0	B	A	--	--	No
2	King Av. & Van Buren Bl.	TS	**145.2**	34.9	**F**	C	**157.0**	40.5	**F**	D	--	--	No
3	Driveway 1 & Van Buren Bl.	CSS	Future Intersection				19.1	17.9	C	C	--	--	No
4	Driveway 2 & Van Buren Bl.	CSS	Future Intersection				23.2	19.8	C	C	--	--	No
5	Washington St. & Driveway 3	CSS	Future Intersection				26.0	33.3	D	D	--	--	No
6	Washington St. & Driveway 4	CSS/TS	**183.7**	**712.2**	**F**	**F**	**64.8**	54.7	**E**	D	--	--	No
7	Washington St. & Driveway 5	CSS	Future Intersection				13.2	15.5	B	C	--	--	No
8	Washington St. & Van Buren Bl.	TS	**139.6**	**98.0**	**F**	**F**	**86.2**	**91.2**	**F**	**F**	--	--	No
9	Gardner Av. & Van Buren Bl.	CSS	**33,486.5**	**29,969.9**	**F**	**F**	**61,420.6**	**40,475.7**	**F**	**F**	--	--	No
10	Porter Av. & Van Buren Bl.	TS	20.0	13.4	B	B	30.2	13.4	C	B	--	--	No
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	TS	**111.9**	38.4	**F**	D	**118.5**	44.7	**F**	D	**6.6**	**6.3**	**Yes**
12	Dauchy Av. & Van Buren Bl.	TS	**67.3**	**67.7**	**E**	**E**	**74.8**	**81.2**	**E**	**F**	**7.5**	**13.5**	**Yes**
13	Wood Rd. & Van Buren Bl.	TS	**118.6**	**78.4**	**F**	**E**	**126.8**	**84.4**	**F**	**F**	**8.2**	**6.0**	**Yes**
14	Trautwein Rd./Cole Av. & Van Buren Bl.	TS	54.0	40.0	D	D	54.4	40.1	D	D	0.4	0.1	No
15	Barton St. & Van Buren Bl.	TS	**101.9**	**87.6**	**F**	**F**	**111.3**	**87.8**	**F**	**F**	**9.4**	0.2	**Yes**

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

[1] Per the Highway Capacity Manual (7th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[2] TS = Traffic Signal; CSS = Cross-Street Stop

[3] Project-related delays were calculated for intersections located in the City of Riverside to identify any deficiencies resulting from the addition of Project traffic, as outlined in Table 2-4.

7.4 TRAFFIC SIGNAL WARRANT ANALYSIS

Traffic signal warrants have been performed for Horizon Year (2045) traffic conditions based on peak hour intersection turning movements volumes or planning level (ADT) volumes. No additional study area intersections are anticipated to meet a traffic signal warrant under Horizon Year (2045) Without and With Project traffic conditions (See Appendix 7.3).

7.5 QUEUING ANALYSIS

At the request of the County, a queuing analysis has been conducted at all signalized study area intersections. With the implementation of Project improvements along Washington Street, the southbound left-turn movement at Washington Street & Van Buren Boulevard (#8) is expected to experience no queuing issues under Horizon Year (2045) With Project traffic conditions. Queuing analysis results are presented in Table 7-2. Worksheets for Horizon Year (2045) traffic conditions queuing analysis are provided in Appendices 7.4 and 7.5, respectively.

TABLE 7-2: HORIZON YEAR (2045) QUEUING SUMMARY (TABLE 1 OF 4)

#	Intersection	Movement	Available Stacking Distance (Feet)	HY (2045) NP				HY (2045) WP			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]		Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
1	Van Buren Bl. & Mockingbird Canyon Rd.	NBL	210	46	36	Yes	Yes	75	57	Yes	Yes
		SBR	100	7	9	Yes	Yes	8	21	Yes	Yes
		EBL[3]	100	341	129	Yes	Yes	352 [2]	134	Yes	Yes
		EBL/R	100	0	0	Yes	Yes	0	0	Yes	Yes
2	King Av. & Van Buren Bl.	NBL	100	**139**	54	**No**	Yes	**139**	54	**No**	Yes
		SBL	85	**109**	63	**No**	Yes	**109**	63	**No**	Yes
		EBL[3]	200	305 [2]	188 [2]	Yes	Yes	305 [2]	188 [2]	Yes	Yes
		EBR	80	3	72	Yes	Yes	3	72	Yes	Yes
		WBL	175	38	45	Yes	Yes	38	45	Yes	Yes
		WBR	160	0	2	Yes	Yes	0	2	Yes	Yes
8	Washington St. & Van Buren Bl.	NBL	140	**178**	88	**No**	Yes	**178**	87	**No**	Yes
		NBR	140	**243**	119	**No**	Yes	**230**	104	**No**	Yes
		SBL	130/415	**371** [2]	**519** [2]	**No**	**No**	317 [2]	420 [2]	Yes	Yes
		SBR	190	--	--	--	--	94	107	Yes	Yes
		EBL	280	**286** [2]	**287** [2]	**No**	**No**	**432** [2]	**311** [2]	**No**	**No**
		WBL	300	**366** [2]	**398** [2]	**No**	**No**	**378**	**398** [2]	**No**	**No**
		WBR	300	**992** [2]	147	**No**	Yes	**1,132** [2]	216	**No**	Yes

TABLE 7-2: HORIZON YEAR (2045) QUEUING SUMMARY (TABLE 2 OF 4)

#	Intersection	Movement	Available Stacking Distance (Feet)	HY (2045) NP				HY (2045) WP			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]		Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
10	Porter Av. & Van Buren Bl.	EBL	295	10	35	Yes	Yes	18	42	Yes	Yes
		EBR	130	23	42	Yes	Yes	27	45	Yes	Yes
		WBL	305	42	37	Yes	Yes	42	40	Yes	Yes
		WBR	140	0	0	Yes	Yes	0	0	Yes	Yes
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	NBL	95	**168**	80	**No**	Yes	**264** [2]	91	**No**	Yes
		SBL	50	**261** [2]	**206** [2]	**No**	**No**	**272** [2]	**206** [2]	**No**	**No**
		EBL	275	**389** [2]	**283** [2]	**No**	**No**	**437** [2]	**283** [2]	**No**	**No**
		EBR	80	36	81	Yes	Yes	41	85	Yes	Yes
		WBL	295	233 [2]	160 [2]	Yes	Yes	242 [2]	160 [2]	Yes	Yes
12	Dauchy Av. & Van Buren Bl.	NBL[3]	60	155	113	Yes	Yes	165	118	Yes	Yes
		SBL	75	47	51	Yes	Yes	47	51	Yes	Yes
		SBR	50	0	0	Yes	Yes	0	0	Yes	Yes
		EBL	295	75 [2]	164 [2]	Yes	Yes	95 [2]	171 [2]	Yes	Yes
		EBR	95	**142**	61	**No**	Yes	**151**	65	**No**	Yes
		WBL	420	249 [2]	241 [1]	Yes	Yes	249 [2]	241 [2]	Yes	Yes
		WBR	160	0	0	Yes	Yes	0	0	Yes	Yes

TABLE 7-2: HORIZON YEAR (2045) QUEUING SUMMARY (TABLE 3 OF 4)

#	Intersection	Movement	Available Stacking Distance (Feet)	HY (2045) NP				HY (2045) WP			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]		Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
13	Wood Rd. & Van Buren Bl.	NBL	485	319 [2]	180 [2]	Yes	Yes	334 [2]	185 [2]	Yes	Yes
		SBL[3]	80	242 [2]	177 [2]	Yes	Yes	242 [2]	177 [2]	Yes	Yes
		EBL	400	394 [2]	346 [2]	Yes	Yes	394 [2]	346 [2]	Yes	Yes
		EBR	300	**716** [2]	201	**No**	Yes	**736** [2]	207	**No**	Yes
		WBL	350	**455** [2]	254 [2]	**No**	Yes	**455** [2]	254 [2]	**No**	Yes
		WBR	235	147	55	Yes	Yes	148	55	Yes	Yes
14	Trautwein Rd./Cole Av. & Van Buren Bl.	NBL	200	**394** [2]	**218** [2]	**No**	**No**	**414** [2]	**221** [2]	**No**	**No**
		SBL	250	125	232 [2]	Yes	Yes	124	227 [2]	Yes	Yes
		SBR	200	**272**	**222**	**No**	**No**	**301**	**232**	**No**	**No**
		EBL	150	**273** [2]	**278** [2]	**No**	**No**	**283** [2]	**283** [2]	**No**	**No**
		EBR	200	57	136	Yes	Yes	64	140	Yes	Yes
		WBL	160	**596** [2]	**371** [2]	**No**	**No**	**597** [2]	**368** [2]	**No**	**No**
		WBR	180	**569** [2]	**298**	**No**	**No**	**557** [2]	289	**No**	**No**

TABLE 7-2: HORIZON YEAR (2045) QUEUING SUMMARY (TABLE 4 OF 4)

#	Intersection	Movement	Available Stacking Distance (Feet)	HY (2045) NP				HY (2045) WP			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]		Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
15	Barton St. & Van Buren Bl.	NBL[3]	150	312 [2]	216	Yes	Yes	303 [2]	216	Yes	Yes
		NBR	145	243	122	Yes	Yes	240	122	Yes	Yes
		SBL	125	54	55	Yes	Yes	54	55	Yes	Yes
		EBL	400	**496** [2]	280 [2]	**No**	Yes	**496** [2]	280 [2]	**No**	Yes
		WBL	190	**531** [2]	**622** [2]	**No**	**No**	**543** [2]	**622** [2]	**No**	**No**

***BOLD** = 95th percentile queue exceeds the available storage; Underline = Project improvement

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided for the 95th queue only. An additional 25 feet of stacking is assumed to be provided within the transition for turn pockets, where applicable, in determining whether storage requirement is met.

[2] 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

[3] The existing painted median provides adequate storage to accommodate periodic 95th percentile queues.

7.6 DEFICIENCIES AND IMPROVEMENTS

7.6.1 Intersections

Improvement strategies to address Horizon Year (2045) traffic deficiencies are presented in Table 7-3. For intersections within the County of Riverside, improvement strategies have been recommended at intersections identified as deficient under Horizon Year (2045) With Project traffic conditions in an effort to achieve an acceptable LOS (i.e., LOS D or better). For intersections within the City of Riverside, the recommended improvement strategies to address Horizon Year (2045) With Project traffic deficiencies presented in Table 7-3 reduce the Project-related delay to less than 5.0 seconds. Worksheets for Horizon Year (2045) With Project, with improvements, are provided in Appendix 7.6.

7.6.2 Queues

Improvements to address queuing deficiencies have been identified where feasible and are shown in Table 7-4. Worksheets for Horizon Year (2045) traffic conditions queues with the recommended intersection improvements from Table 7-3 are provided in Appendix 7.7.

Improvements have not been identified at the following movements, as improvements are not considered feasible due to physical constraints on the existing roadways as noted:

- Washington Street & Van Buren Boulevard (#8), Westbound right-turn lane: the existing westbound right turn lane already extends back to the first existing right-in/right-out driveway to the east for the shopping center on the northeast corner. Under Horizon Year (2045) With Project, With Improvements conditions, the westbound right-turn queues are projected to extend beyond the driveway despite the recommended improvements identified in Table 7-4. Therefore, it is recommended that the Project provides "Keep Clear" striping across the right-in/right-out driveway on Van Buren Boulevard to maintain driveway access when queues periodically exceed the available storage length.
- Chicago Avenue / Alta Cresta Avenue & Van Buren Boulevard (#11), Southbound left-turn lane: extending the southbound left turn pocket beyond the existing 50-feet would extend beyond/block the existing driveway north of Van Buren Boulevard although the pavement appears to be sufficient to accommodate the required 250-foot storage length.
- Chicago Avenue / Alta Cresta Avenue & Van Buren Boulevard (#11), Eastbound left-turn lane: extending the eastbound left turn pocket beyond the existing 275-feet would modifications to the existing raised median and affecting the storage length for the westbound left-turn pocket at the existing driveway immediately to the west.
- Dauchy Avenue & Van Buren Boulevard (#12), Eastbound right-turn lane: extending the eastbound right turn pocket beyond the existing 95-feet is not feasible as it already extends back to the driveway of the restaurant on the southwest corner of the intersection.
- Wood Road & Van Buren Boulevard (#13), Eastbound right-turn lane: accommodating a 625-foot eastbound right turn lane would require additional right-of-way and would extend beyond the existing driveway for the retail buildings approximately 415-feet west of Wood Road.
- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14), Northbound left-turn lane: although the striped turn pocket for the northbound left-turn pocket accommodates only 200-feet of storage, 410-feet of storage can be accommodated before blocking the intersection of Cole Avenue and Bergamont Drive. No additional improvements are recommended.

- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14), Southbound left-turn lane: extending the southbound left turn pocket beyond the existing 200-feet is not feasible as it already extends back to the driveway of the Walgreens on the northwest corner of the intersection.
- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14), Westbound left-turn lane: improvement may not be feasible to modify the existing landscaped median to lengthen the westbound left turn storage without impacting the required reverse curve and/or the storage for the eastbound left turn pocket at the upstream driveway into the existing Albertson's shopping center. Accommodating dual westbound left turn lanes might be feasible but would require modifications to the existing median and potential restriping and vehicle turn review to ensure no conflicts for turning vehicles from the opposite side and adequate receiving lane widths.
- Trautwein Road / Cole Avenue & Van Buren Boulevard (#14), Westbound right-turn lane: although an improvement is shown in Table 7-4 with 325-feet of storage, extending beyond this distance is not feasible without acquiring additional right-of-way and impacting existing Class II bike lanes and also sidewalk and landscaping for the existing Alberton's shopping center. This queuing issue is consistent with Existing conditions.

TABLE 7-3: HORIZON YEAR (2045) INTERSECTION ANALYSIS WITH IMPROVEMENTS (TABLE 1 OF 2)

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
2	King Av. & Van Buren Bl.																	
	Without Improvements:	TS	1	1	0	1	1	0	1	2	1	1	2	1	**157.0**	40.5	**F**	D
	With Improvements:	**TS**[4]	1	1	0	1	1	0	1	2	1	1	**3**	1	35.2	34.2	D	C
6	Washington St. & Driveway 4												-					
	With Project, Without Improvements:	TS	**1**	1	**1**	0	**3**	0	0	**1**	0	0	1	0	**64.8**	54.7	**E**	D
	With Project, With Improvements:	**TS**[5]	**1**	1	**1**	0	**3**	0	0	**1**	0	0	1	0	54.8	50.5	D	D
8	Washington St. & Van Buren Bl.																	
	With Project, Without Improvements:	TS	2	2	1	2	2	**1**	1	2	0	1	2	1	**86.2**	**91.2**	**F**	**F**
	With Project, With Improvements:	**TS**[5]	2	2	**1>**	2	2	**1**	1	**3**	0	1	**3**	**1>**	47.4	51.8	D	D
9	Gardner Av. & Van Buren Bl.																	
	Without Improvements:	CSS	0	1	0	0	1	0	1	2	0	1	2	0	**61,420.6**	**40,475.7**	**F**	**F**
	With Improvements:	**TS**	0	1	0	0	1	0	1	2	0	1	2	0	26.0	21.4	C	C
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	-																
	Without Improvements:	TS	1	1	0	1	1	0	1	2	1	1	2	0	**118.5**	44.7	**F**	D
	With Improvements:	TS	1	1	0	1	1	0	1	2	1	1	**3**	0	50.3	28.0	D	C
12	Dauchy Av. & Van Buren Bl.																	
	Without Improvements:	TS	1	1	0	1	1	1	1	2	1	1	2	1	**74.8**	**81.2**	**E**	**F**
	With Improvements:	TS	1	1	0	1	1	1	1	2	1	1	**3**	1	33.7	54.6	C	D
13	Wood Rd. & Van Buren Bl.																	
	Without Improvements:	TS	2	2	0	1	2	0	1	2	1	2	2	1	**126.8**	**84.4**	**F**	**F**
	With Improvements:	TS	2	2	**1>**	1	2	0	1	**3**	**1**	2	**3**	1	52.9	41.8	D	D

TABLE 7-3: HORIZON YEAR (2045) INTERSECTION ANALYSIS WITH IMPROVEMENTS (TABLE 2 OF 2)

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
15	Barton St. & Van Buren Bl.																	
	Without Improvements:	TS	2	1	1	1	1	0	1	2	0	1	3	0	**111.3**	**87.8**	**F**	**F**
	With Improvements:	**TS[5]**	2	1	1	1	1	0	2	**3**	**1>**	1	3	0	**60.6**	36.8	**E**	D

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

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; >> = Free-Right Turn Lane; > = Right-Turn Overlap Phasing; **1** = Improvement

2 Per the Highway Capacity Manual 7th Edition, overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

3 CSS= Cross-Street Stop; TS = Traffic Signal

4 Increase cycle length from 90-seconds to 120-seconds for the AM peak hour only.

5 Increase cycle length from 120-seconds to 130-seconds for the AM Peak hour only.

TABLE 7-4: HORIZON YEAR (2045) QUEUING SUMMARY WITH IMPROVEMENTS

#	Intersection	Movement	Available Stacking Distance (Feet)	HY (2045) WP			
				Synchro: 95th Percentile Queue (Feet)		Acceptable?[1]	
				AM Peak Hour	PM Peak Hour	AM	PM
2	King Av. & Van Buren Bl.	NBL	150	139 [2]	54	Yes	Yes
		SBL	110	109 [2]	63	Yes	Yes
8	Washington St. & Van Buren Bl. [3]	NBL	190	186	85	Yes	Yes
		NBR	250	212	88	Yes	Yes
		SBL	415	350 [2]	236	Yes	Yes
		SBR	190	86	72	Yes	Yes
		EBL	280	279	231	Yes	Yes
		WBL	350	331 [2]	353 [2]	Yes	Yes
		WBR	300	**1,050** [2]	257	**No**	Yes
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.	NBL	200	183 [2]	92	Yes	Yes
13	Wood Rd. & Van Buren Bl.	WBL	375	366 [2]	206 [2]	Yes	Yes
14	Trautwein Rd./Cole Av. & Van Buren Bl.	NBL	410	414 [2]	221 [2]	Yes	Yes
		EBL	300	283 [2]	283 [2]	Yes	Yes
		WBR	325	**557** [2]	289	**No**	Yes
15	Barton St. & Van Buren Bl.	EBL	500	480 [2]	283 [2]	Yes	Yes
		EBR	100	52	45	Yes	Yes
		WBL	550	421 [2]	524 [2]	Yes	Yes

***BOLD** = 95th percentile queue exceeds the available storage; Underline = Improvement

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided for the 95th queue only. An additional 25 feet of stacking is assumed to be provided within the transition for turn pockets, where applicable, in determining whether storage requirement is met.

[2] 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

[3] Improvements at Washington St. & Van Buren Bl. (#8) include modifying the traffic signal to increase the green time for the eastbound left-turn movement and implementing overlap phasing for the westbound right-turn approach.

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8 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the County of Riverside are funded through a combination of improvements constructed by the Project, development impact fee programs or fair share contributions. Fee programs applicable to the Project are described below.

8.1 COUNTY OF RIVERSIDE DEVELOPMENT IMPACT FEE (DIF) PROGRAM

The Project is located within the County's Woodcrest Area Plan and therefore will be subject to County of Riverside DIF in an effort by the County to address development throughout its unincorporated area. The DIF program consists of two separate transportation components: the Roads, Bridges and Major Improvements component and the Traffic Signals component. Eligible facilities for funding by the County DIF program are identified on the County's Public Needs List, which currently extends through the year 2020. (9) A comprehensive review of the DIF program is now planned in order to update the Nexus study. This will result in development of a revised "needs list" extending the program time horizon from 2010 to 2030.

The cost of signalizing DIF network intersections is identified under the Traffic Signals component of the DIF program. County staff generally define DIF eligible intersections as those consisting of two intersecting general plan roadways. If the intersection meets this requirement, it is potentially eligible for up to $235,000 of credit, which is subject to negotiations with the County.

8.2 RIVERSIDE COUNTY TRANSPORTATION UNIFORM MITIGATION FEE (TUMF)

The TUMF program is administered by the WRCOG based upon a regional Nexus Study most recently updated in 2024 to address major changes in right of way acquisition and improvement cost factors. (3) This regional program was put into place to ensure that development pays its fair share, and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

8.3 MEASURE A

Measure A, Riverside County's half-cent sales tax for transportation, was adopted by voters in 1988 and extended in 2002. It will continue to fund transportation improvements through 2039. Measure A funds a wide variety of transportation projects and services throughout the County. RCTC is responsible for administering the program. Measure A dollars are spent in accordance with a voter-approved expenditure plan that was adopted as part of the 1988 election.

8.4 FAIR SHARE CONTRIBUTION

Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the County's discretion). When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed

fair share calculations, for each peak hour, have been provided in Table 8-1 for the applicable deficient study area intersection and for each applicable phase. These fees are collected with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

Although the City of Riverside does not have a fair share program, the fair share calculations presented in Table 8-1 are provided for informational purposes. It is anticipated that the City would utilize the fair share information to condition the Project to install traffic signal infrastructure improvements in specific locations within the City.

TABLE 8-1: EAPC (2027) PROJECT FAIR SHARE CALCULATIONS

#	Intersection		Existing (2025)	Project	2027 With Project	Total New Traffic	Project % of New Traffic[1]
2	King Av. & Van Buren Bl.						
		AM:	2,794	141	3,630	836	**16.9%**
		PM:	2,865	87	3,424	559	15.6%
8	Washington St. & Van Buren Bl.						
		AM:	3,978	375	5,474	1,496	**25.1%**
		PM:	4,098	226	5,241	1,143	19.8%
9	Gardner Av. & Van Buren Bl.						
		AM:	3,169	236	4,343	1,174	**20.1%**
		PM:	3,225	145	4,044	819	17.7%
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.						
		AM:	2,989	212	4,380	1,391	**15.2%**
		PM:	3,154	130	4,170	1,016	12.8%
12	Dauchy Av. & Van Buren Bl.						
		AM:	3,068	189	4,416	1,348	**14.0%**
		PM:	3,197	117	4,054	857	13.7%
13	Wood Rd. & Van Buren Bl.						
		AM:	4,355	142	5,691	1,336	**10.6%**
		PM:	3,883	87	4,807	924	9.4%
14	Trautwein Rd./Cole Av. & Van Buren Bl.						
		AM:	4,199	118	5,333	1,134	**10.4%**
		PM:	4,044	73	4,841	797	9.2%
15	Barton St. & Van Buren Bl.						
		AM:	3,777	47	4,454	677	**6.9%**
		PM:	3,590	29	4,061	471	6.2%

[1] **BOLD =** Highest fair share percentage is highlighted.

TABLE 8-2: HORIZON YEAR (2045) PROJECT FAIR SHARE CALCULATIONS

#	Intersection		Existing (2025)	Project	2045 With Project	Total New Traffic	Project % of New Traffic[1]
2	King Av. & Van Buren Bl.						
		AM:	2,794	141	4,539	1,745	**8.1%**
		PM:	2,865	87	4,013	1,148	7.6%
6	Washington St. & Driveway 4						
		AM:	1,687	328	2,504	817	40.1%
		PM:	1,740	252	2,341	601	**41.9%**
8	Washington St. & Van Buren Bl.						
		AM:	3,978	375	7,108	3,130	**12.0%**
		PM:	4,098	226	6,084	1,986	11.4%
9	Gardner Av. & Van Buren Bl.						
		AM:	3,169	236	4,673	1,504	**15.7%**
		PM:	3,225	145	4,380	1,155	12.6%
11	Chicago Av./Alta Cresta Av. & Van Buren Bl.						
		AM:	2,989	212	5,053	2,064	**10.3%**
		PM:	3,154	130	4,701	1,547	8.4%
12	Dauchy Av. & Van Buren Bl.						
		AM:	3,068	189	4,735	1,667	**11.3%**
		PM:	3,197	117	4,387	1,190	9.8%
13	Wood Rd. & Van Buren Bl.						
		AM:	4,355	142	6,906	2,551	**5.6%**
		PM:	3,883	87	5,950	2,067	4.2%
14	Trautwein Rd./Cole Av. & Van Buren Bl.						
		AM:	4,199	118	6,013	1,814	**6.5%**
		PM:	4,044	73	5,815	1,771	4.1%
15	Barton St. & Van Buren Bl.						
		AM:	3,777	47	5,122	1,345	**3.5%**
		PM:	3,590	29	4,538	948	3.1%

[1] **BOLD =** Highest fair share percentage is highlighted.

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9 REFERENCES

1. **County of Riverside.** *Transportation Analysis Guidelines.* County of Riverside : s.n., December 2020.
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6. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (CA MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CA MUTCD).* 2014, Updated March 30, 2021 (Revision 6).
7. **City of Riverside.** *Traffic Impact Analyis Guidelines for Vehicle Miles Traveled and Level of Service Assessment.* April 2025.
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10 CERTIFICATION

The contents of this Traffic Analysis represent an accurate depiction of the transportation environment and deficiencies associated with the proposed Woodcrest Retail Center Project. The information contained in this Traffic Analysis is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 861-0177.

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