Figure 5.7c: Opening Year II 2030 With Project AM Peak Hour PCE Traffic Volumes (Continued)

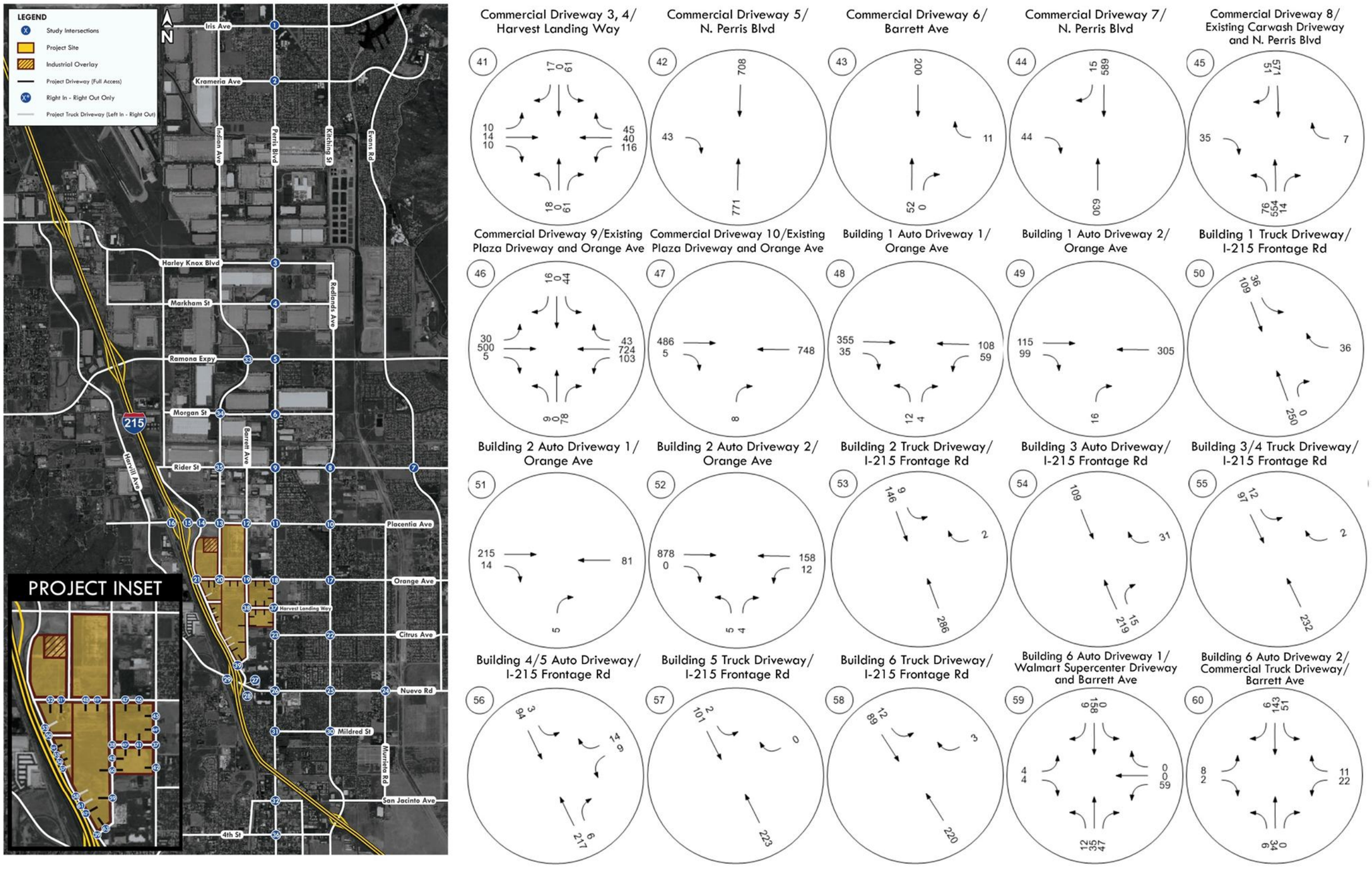
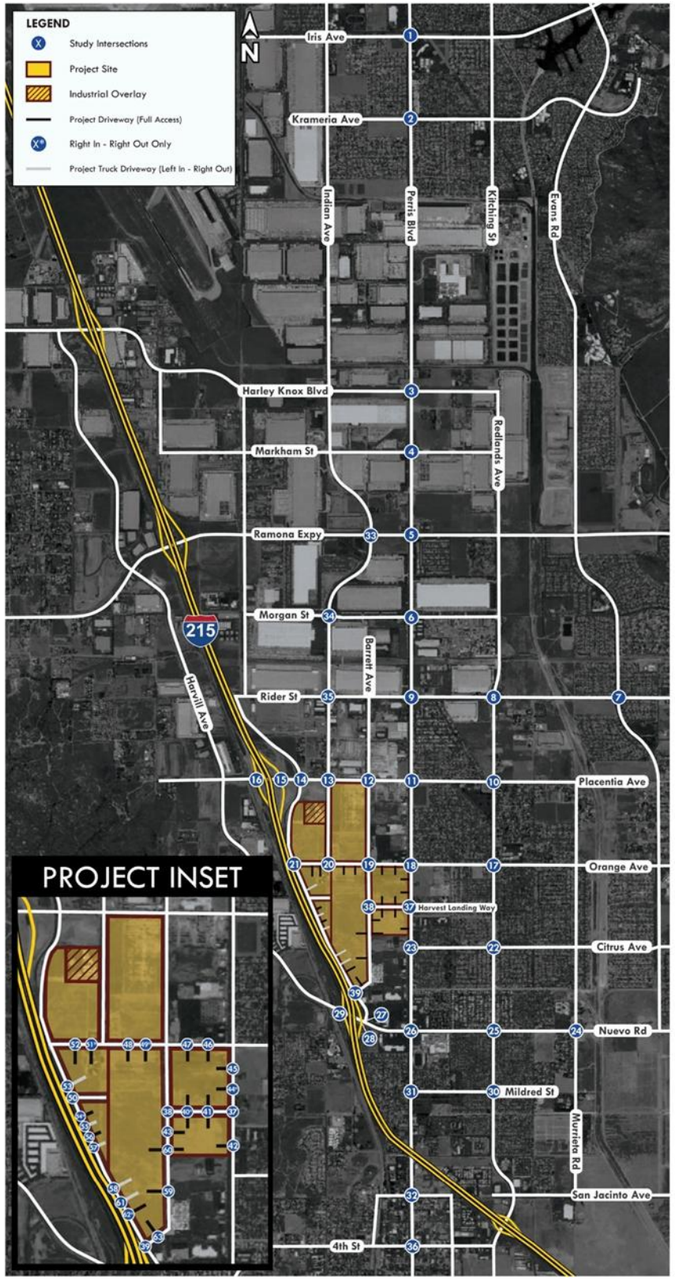


Figure 5.7d: Opening Year II 2030 With Project AM Peak Hour PCE Traffic Volumes (Continued)



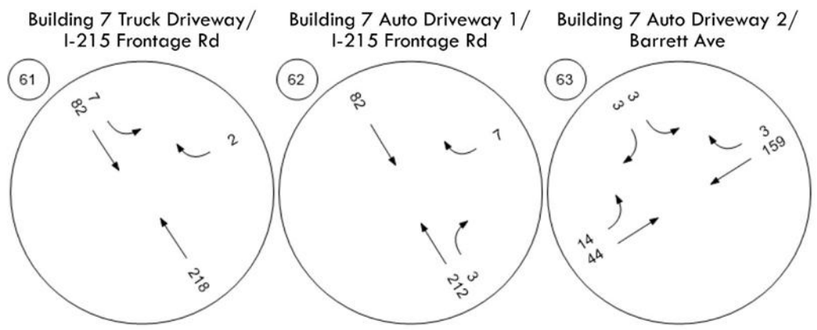


Figure 5.8a: Opening Year II 2030 With Project PM Peak Hour PCE Traffic Volumes

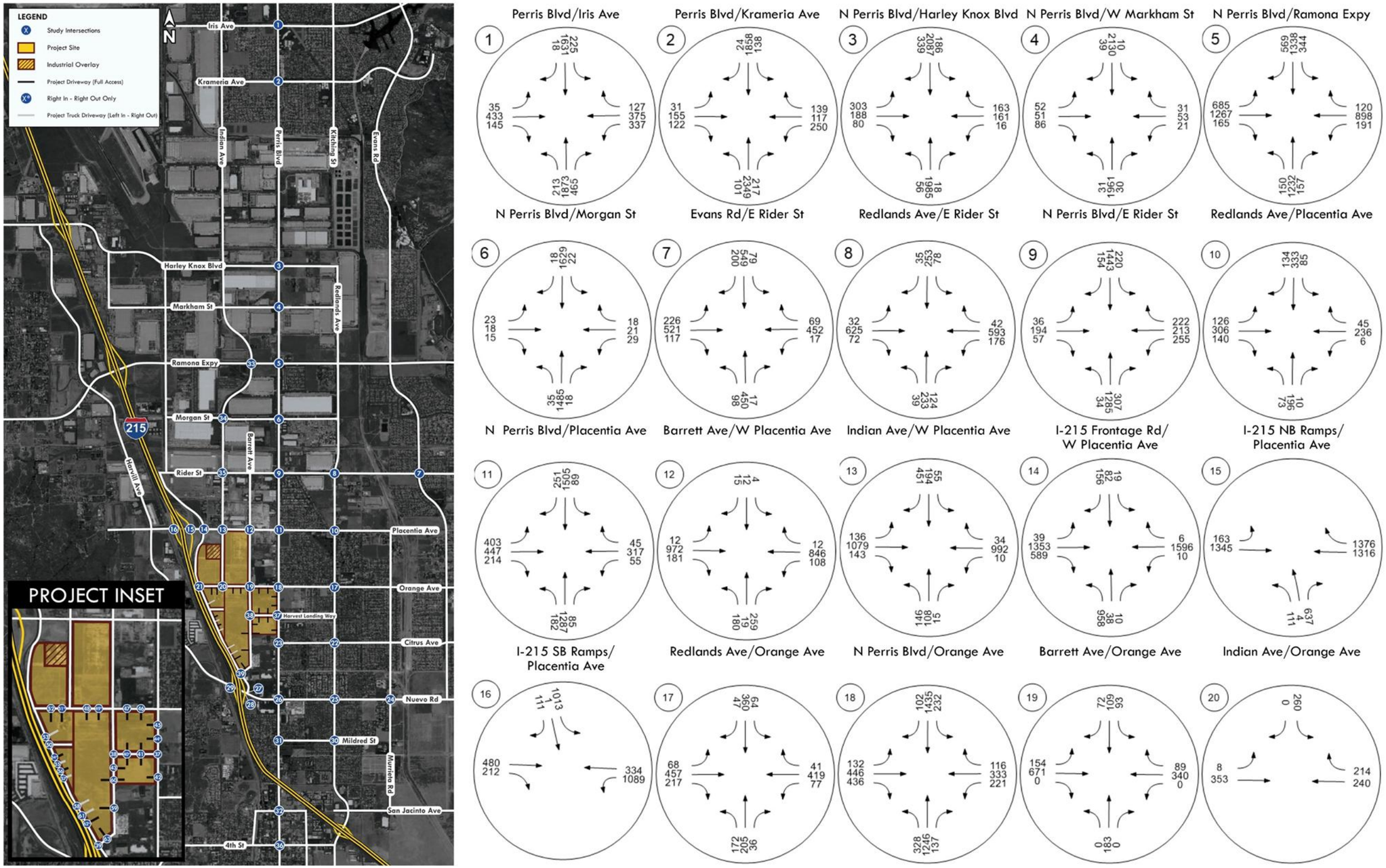


Figure 5.8b: Opening Year II 2030 With Project PM Peak Hour PCE Traffic Volumes (Continued)

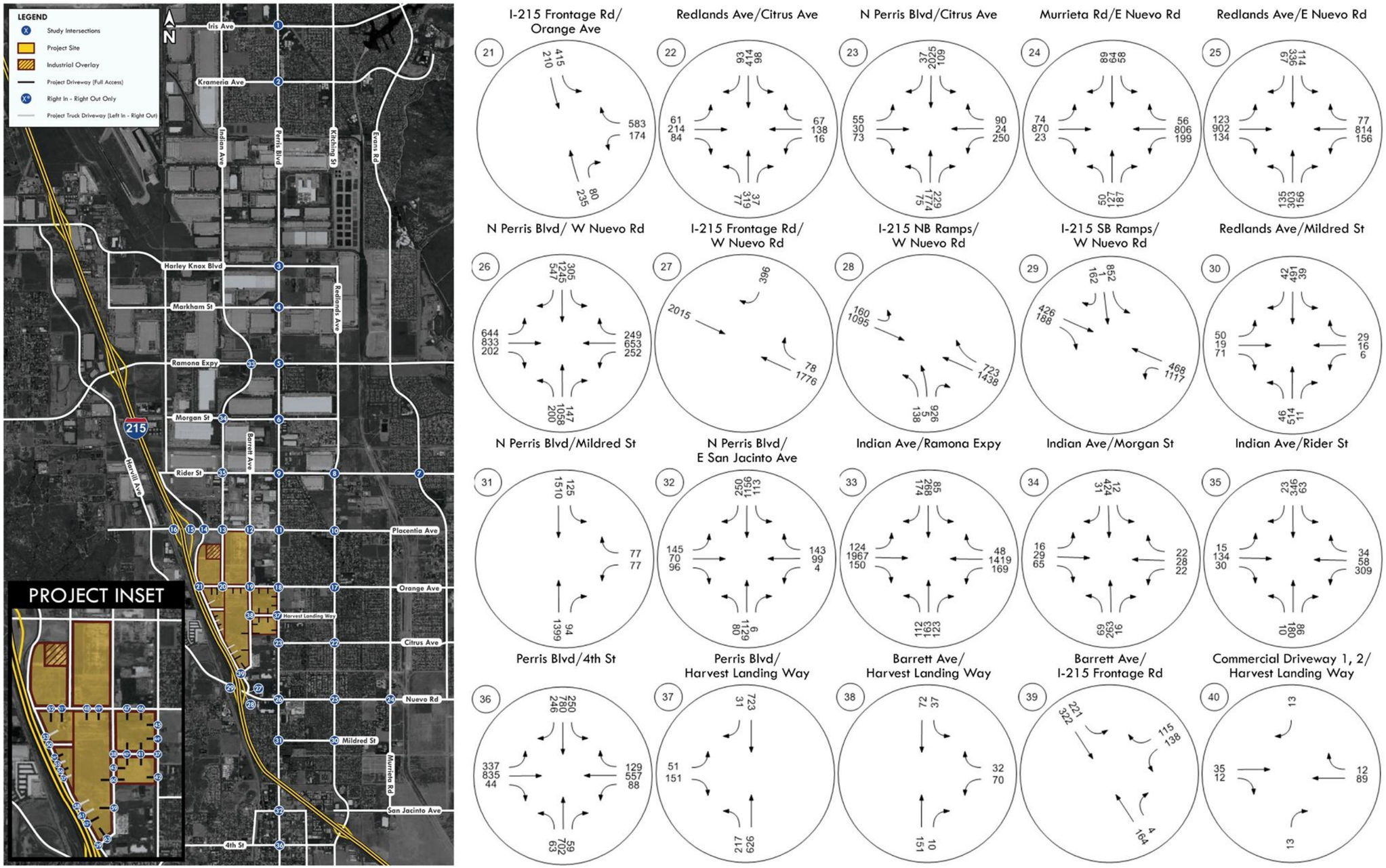


Figure 5.8c: Opening Year II 2030 With Project PM Peak Hour PCE Traffic Volumes (Continued)

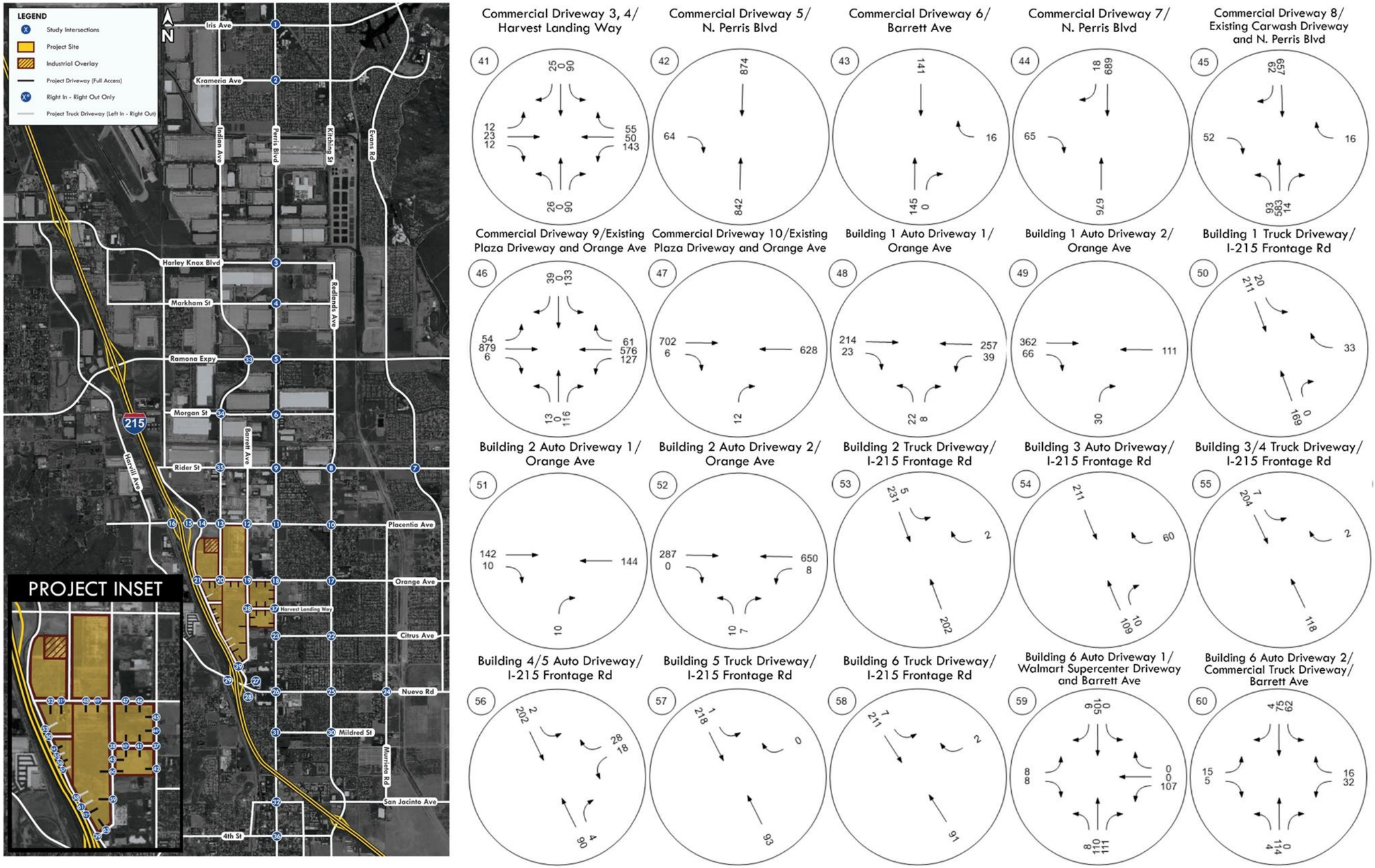
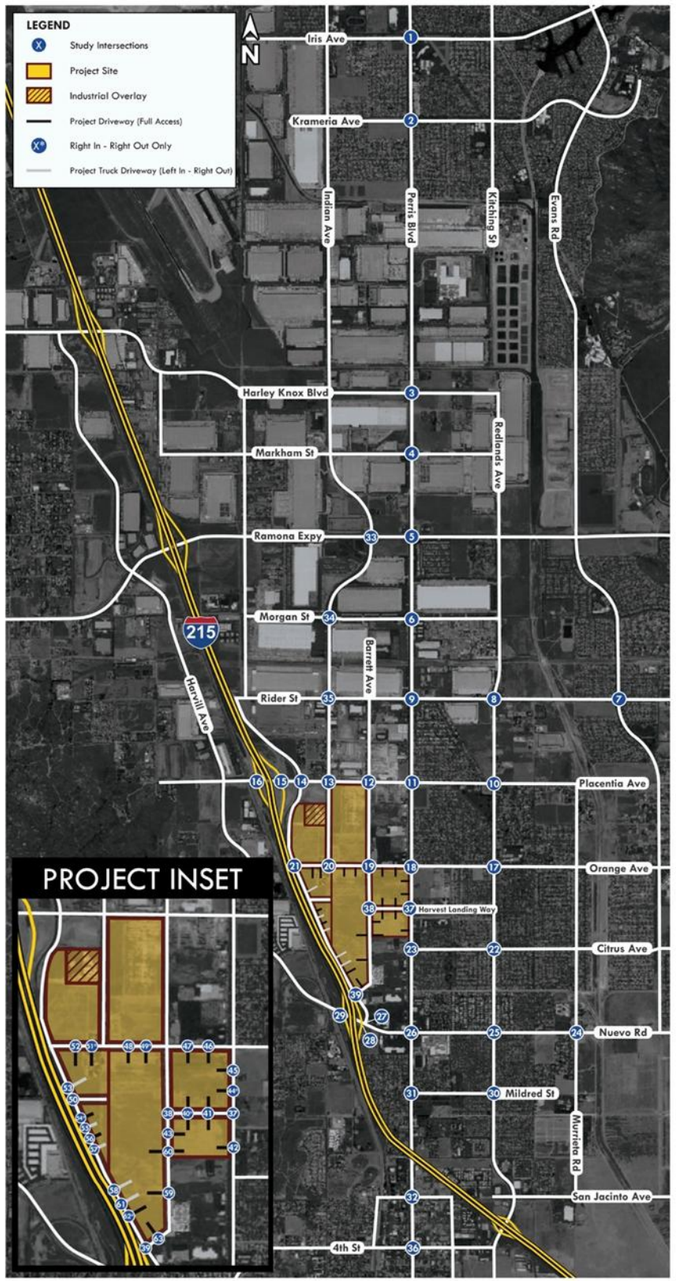
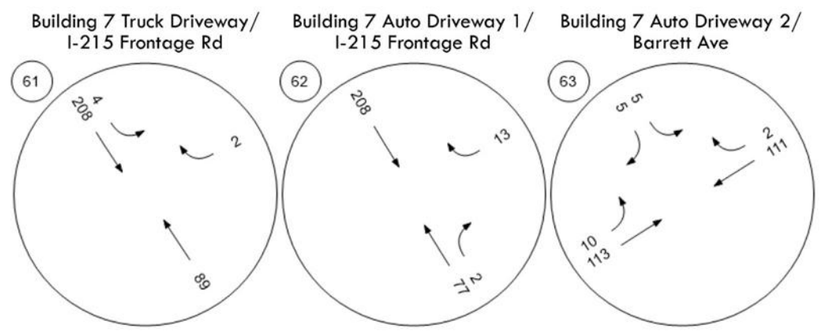


Figure 5.8d: Opening Year II 2030 With Project PM Peak Hour PCE Traffic Volumes (Continued)





5.3 General Plan 2045 With Project Traffic Conditions

General Plan 2045 With Project traffic volumes were determined by adding the Project trips to the General Plan 2045 Without Project traffic volumes. Intersection lane configuration and traffic control under General Plan 2405 is shown in *Figure 5.9*. The General Plan 2045 With Project AM and PM peak hour traffic volumes at the study area intersections are shown in Figure 5.10 and Figure 5.11 respectively.

The Project proposes to remove 2,700 feet of Indian Avenue between Orange Avenue and I-215 Frontage Road South. The Project would also construct the planned segment of Barrett Ave south of Orange Avenue from Orange Avenue to the existing southern portion of Barrett Avenue that connects to I-215 Frontage Road. As part of the analysis for this scenario, the inbound trips to Indian Avenue at intersection #20 (Indian Avenue/Orange Avenue) were redirected to intersection #21 (I-215 Frontage Rd/Orange Ave) and ultimately to intersection #39 (Barrett Ave/I-215 Frontage Road). Additionally, the outbound trips originating from Indian Avenue were rerouted from intersection #39 (Barrett Ave/I-215 Frontage Road) to intersection #19 (Barrett Ave/Orange Ave), and finally to intersection #20 (Indian Avenue/Orange Ave) as a westbound right-turn.

An intersection operations analysis was conducted for the study area to evaluate the General Plan 2045 With Project AM and PM peak hour conditions. Intersection operations were calculated using the LOS methodology described previously in *Section 2.3 - Methodology*. Table 5.9 provides a comparison between the General Plan 2045 Without and With-Project scenarios. As shown in Table 5.9, the following 21 intersections would operate at an unsatisfactory LOS under the General Plan 2045 With Project condition:

- #1. Perris Blvd/Iris Ave (LOS F during AM and PM peak hour)
- #2. Perris Blvd/Krameria Ave (LOS F during AM and PM peak hour)
- #3. N Perris Blvd/Harley Knox Blvd (LOS F during PM peak hour)
- #4. N Perris Blvd/W Markham St (LOS F during AM peak hour and LOS E during PM peak hour)
- #5. Perris Blvd/Ramona Expy (LOS F during AM peak hour)
- #10. Redlands Ave/Placentia Ave (LOS F during AM and PM peak hour)
- #11. N Perris Blvd/Placentia Ave (LOS F during PM peak hour)
- #14. I-215 Frontage Rd/W Placentia Ave (LOS F during PM peak hour)
- #17. Redlands Ave/Orange Ave (LOS E during AM peak hour)
- #18. N Perris Blvd/Orange Ave (LOS F during PM peak hour)
- #21. I-215 Frontage Rd/Orange Ave (LOS F during AM and PM peak hour)
- #22. Redlands Ave/Citrus Ave (LOS F during AM and PM peak hour)
- #23. N Perris Blvd/Citrus Ave (LOS E during AM peak hour and LOS F during PM peak hour)
- #24. Murrieta Rd/E Nuevo Rd (LOS E during AM peak hour)
- #25. Redlands Ave/E Nuevo Rd (LOS E during AM and PM peak hour)
- #26. N Perris Blvd/ W Nuevo Rd (LOS E during AM and PM peak hour)
- #27. I-215 Frontage Rd/W Nuevo Rd (LOS F during PM peak hour)
- #28. I-215 NB Ramps/W Nuevo Rd (LOS F during AM peak hour)
- #29. I-215 SB Ramps/W Nuevo Rd (LOS F during PM peak hour)
- #30. Redlands Ave/Midred St (LOS E during AM peak hour)
- #32. N Perris Blvd/E San Jacinto Ave (LOS F during AM and PM peak hour)

Recommended improvements for the intersections with an unsatisfactory LOS can be found in Section 6.

Table 5.9: General Plan 2045 With Project AM and PM Peak Hour LOS

	Intersection	Jurisdiction	Control Type	General Plan 2045 Conditions				General Plan 2045 Plus Project Conditions				Difference		LOS Standard	Satisfactory?
				AM Peak		PM Peak		AM Peak		PM Peak		AM Peak	PM Peak		
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	Delay		
1.	Perris Blvd/Iris Ave	City of Moreno Valley	Signalized	350.3	F	131.8	F	358.2	F	139.4	F	7.9	7.6	D	No
2.	Perris Blvd/Krameria Ave	City of Moreno Valley	Signalized	317.5	F	207.5	F	331.2	F	226.2	F	13.7	18.7	D	No
3.	N Perris Blvd/Harley Knox Blvd	City of Perris	Signalized	39.5	D	238.0	F	41.1	D	251.1	F	1.6	13.1	D	No
4.	N Perris Blvd/W Markham St	City of Perris	Signalized	133.0	F	57.4	E	159.3	F	68.8	E	26.3	11.4	D	No
5.	N Perris Blvd/Ramona Expy	City of Perris	Signalized	101.9	F	66.5	E	115.7	F	78.2	E	13.8	11.7	E	No
6.	N Perris Blvd/Morgan St	City of Perris	Signalized	30.9	C	16.8	B	33.9	C	17.0	B	3.0	0.2	D	Yes
7.	Evans Rd/E Rider St	City of Perris	Signalized	43.8	D	32.3	C	44.8	D	33.3	C	1.0	1.0	D	Yes
8.	Redlands Ave/E Rider St	City of Perris	Signalized	32.7	C	42.9	D	33.5	C	46.8	D	0.8	3.9	D	Yes
9.	N Perris Blvd/E Rider St	City of Perris	Signalized	31.5	C	31.8	C	33.3	C	33.0	C	1.8	1.2	D	Yes
10.	Redlands Ave/Placentia Ave	City of Perris	All-way stop	109.6	F	390.6	F	87.5	F	362.2	F	-22.1	-28.4	D	No
11.	N Perris Blvd/Placentia Ave	City of Perris	Signalized	37.1	D	209.6	F	43.2	D	242.1	F	6.1	32.5	D	No
12.	Barrett Ave/W Placentia Ave	City of Perris	Signalized	53.6	F	69.2	F	33.6	C	26.6	C	-20.0	-42.6	D	Yes
13.	Indian Ave/W Placentia Ave	City of Perris	Signalized	50.6	D	31.6	C	52.4	D	50.7	D	1.8	19.1	D	Yes
14.	I-215 Frontage Rd/W Placentia Ave	City of Perris	Signalized	27.4	C	29.0	C	44.0	D	283.2	F	16.6	254.2	D	No
15.	I-215 NB Ramps/Placentia Ave	Caltrans/City of Perris	Signalized	21.8	C	16.2	B	24.6	C	18.3	B	2.8	2.1	E	Yes
16.	I-215 SB Ramps/Placentia Ave	Caltrans/City of Perris	Signalized	16.1	B	19.9	B	18.1	B	66.6	E	2.0	46.7	E	Yes
17.	Redlands Ave/Orange Ave	City of Perris	Signalized	45.4	D	34.1	C	59.6	E	37.2	D	14.2	3.1	D	No
18.	N Perris Blvd/Orange Ave	City of Perris	Signalized	35.9	D	51.4	D	54.9	D	116.6	F	19.0	65.2	D	No
19.	Barrett Ave/Orange Ave	City of Perris	Signalized	49.2	E	24.9	C	15.9	B	16.8	B	-33.3	-8.1	D	Yes
20.	Indian Ave/Orange Ave	City of Perris	Signalized	21.8	C	15.1	C	15.5	B	12.8	B	-6.3	-2.3	D	Yes
21.	I-215 Frontage Rd/Orange Ave	City of Perris	Signalized	15.5	C	16.1	C	135.1	F	317.4	F	119.6	301.3	D	No
22.	Redlands Ave/Citrus Ave	City of Perris	All-way stop	40.4	E	54.4	F	98.9	F	94.2	F	58.5	39.8	D	No
23.	N Perris Blvd/Citrus Ave	City of Perris	Signalized	45.8	D	59.5	E	61.1	E	95.0	F	15.3	35.5	D	No
24.	Murrieta Rd/E Nuevo Rd	City of Perris	Signalized	46.5	D	32.7	C	60.9	E	33.0	C	14.4	0.3	D	No
25.	Redlands Ave/E Nuevo Rd	City of Perris	Signalized	53.0	D	26.1	C	66.6	E	69.3	E	13.6	43.2	D	No
26.	N Perris Blvd/ W Nuevo Rd	City of Perris	Signalized	47.7	D	47.1	D	75.3	E	68.4	E	27.6	21.3	D	No
27.	I-215 Frontage Rd/W Nuevo Rd	City of Perris	Two-way stop	21.9	C	50.5	F	31.9	D	190.4	F	10.0	139.9	D	No
28.	I-215 NB Ramps/W Nuevo Rd	Caltrans/City of Perris	Signalized	85.2	F	16.1	B	101.4	F	26.4	C	16.2	10.3	E	No
29.	I-215 SB Ramps/W Nuevo Rd	Caltrans/City of Perris	Signalized	17.5	B	41.3	D	17.8	B	86.6	F	0.3	45.3	E	No
30.	Redlands Ave/Mildred St	City of Perris	All-way stop	44.0	E	16.5	C	48.8	E	18.0	C	4.8	1.5	D	No
31.	N Perris Blvd/Millidred St	City of Perris	Signalized	11.3	B	6.9	A	12.4	B	7.5	A	1.1	0.6	D	Yes
32.	N Perris Blvd/E San Jacinto Ave	City of Perris	Signalized	117.6	F	103.0	F	135.8	F	111.6	F	18.2	8.6	D	No
33.	Indian Ave/Ramona Expy	City of Perris	Signalized	48.8	D	47.7	D	49.0	D	50.1	D	0.2	2.4	E	Yes
34.	Indian Ave/Morgan St	City of Perris	Signalized	26.5	C	27.2	C	25.7	C	26.8	C	-0.8	-0.4	D	Yes
35.	Indian Ave/Rider St	City of Perris	Signalized	23.1	C	31.9	C	22.5	C	31.3	C	-0.6	-0.6	D	Yes
36.	Perris Blvd/4th St	Caltrans/City of Perris	Signalized	49.5	D	39.8	D	67.6	E	53.0	D	18.1	13.2	E	Yes
37.	Perris Blvd/Harvest Landing Way	City of Perris	Signalized	-	-	-	-	10.2	B	12.8	B	-	-	D	Yes
38.	Barrett Ave/Harvest Landing Way	City of Perris	All-way stop	-	-	-	-	8.4	A	8.6	A	-	-	D	Yes
39.	Barrett Ave/I-215 Frontage Road	City of Perris	Signalized	13.4	B	15.5	C	15.1	B	15.0	B	1.7	-0.5	D	Yes
40.	Commercial Driveway 1, 2 and Harvest Landing Way	City of Perris	Two-way stop	-	-	-	-	8.5	A	8.6	A	-	-	D	Yes
41.	Commercial Driveway 3, 4 and Harvest Landing Way	City of Perris	Two-way stop	-	-	-	-	12.7	B	15.1	C	-	-	D	Yes
42.	Commercial Driveway 5 and N. Perris Blvd	City of Perris	Two-way stop	-	-	-	-	12.1	B	13.5	B	-	-	D	Yes
43.	Commercial Driveway 6 and Barrett Ave	City of Perris	Two-way stop	-	-	-	-	8.6	A	9.0	A	-	-	D	Yes
44.	Commercial Driveway 7 and N. Perris Blvd	City of Perris	Two-way stop	-	-	-	-	11.4	B	12.3	B	-	-	D	Yes
45.	Commercial Driveway 8 and N. Perris Blvd	City of Perris	Two-way stop	10.3	B	10.6	B	11.9	B	13.0	B	-	-	D	Yes
46.	Commercial Driveway 9/Existing Plaza Driveway and Orange Ave	City of Perris	Signalized	20.3	C	40.4	E	10.5	B	14.6	B	-9.8	-25.8	D	Yes
47.	Commercial Driveway 10/Orange Ave	City of Perris	Two-way stop	-	-	-	-	9.8	A	10.7	B	-	-	D	Yes
48.	Building 1 Auto Driveway 1 and Orange Ave	City of Perris	Two-way stop	-	-	-	-	13.2	B	12.0	B	-	-	D	Yes
49.	Building 1 Auto Driveway 2 and Orange Ave	City of Perris	Two-way stop	-	-	-	-	8.9	A	9.7	A	-	-	D	Yes
50.	Building 1 Truck Driveway and I-215 Frontage Rd	City of Perris	Signalized	-	-	-	-	3.2	A	3.0	A	-	-	D	Yes
51.	Building 2 Auto Driveway 1 and Orange Ave	City of Perris	Two-way stop	-	-	-	-	8.9	A	8.7	A	-	-	D	Yes
52.	Building 2 Auto Driveway 2 and Orange Ave	City of Perris	Two-way stop	-	-	-	-	19.9	C	13.9	B	-	-	D	Yes
53.	Building 2 Truck Driveway and I-215 Frontage Rd	City of Perris	Two-way stop	-	-	-	-	9.1	A	8.8	A	-	-	D	Yes
54.	Building 3 Auto Driveway and I-215 Frontage Rd	City of Perris	Two-way stop	-	-	-	-	9.1	A	8.8	A	-	-	D	Yes
55.	Building 3 Auto Driveway and I-215 Frontage Rd	City of Perris	Two-way stop	-	-	-	-	8.9	A	8.6	A	-	-	D	Yes
56.	Building 3/4 Truck Driveway and I-215 Frontage Rd	City of Perris	Two-way stop	-	-	-	-	10.3	B	9.8	A	-	-	D	Yes
57.	Building 5 Truck Driveway and I-215 Frontage Rd	City of Perris	Two-way stop	-	-	-	-	7.7	A	7.4	A	-	-	D	Yes
58.	Building 6 Truck Driveway and I-215 Frontage Rd	City of Perris	Two-way stop	-	-	-	-	8.9	A	8.5	A	-	-	D	Yes
59.	Building 6 Auto Driveway 1/Walmart Supercenter Driveway and	City of Perris	Two-way stop	-	-	-	-	10.6	B	11.6	B	-	-	D	Yes
60.	Building 6 Auto Driveway 2 and Barrett Ave	City of Perris	Two-way stop	-	-	-	-	10.9	B	11.4	B	-	-	D	Yes
61.	Building 7 Truck Driveway and I-215 Frontage Rd	City of Perris	Two-way stop	-	-	-	-	8.9	A	8.5	A	-	-	D	Yes
62.	Building 7 Auto Driveway 1 and I-215 Frontage Rd	City of Perris	Two-way stop	-	-	-	-	8.9	A	8.5	A	-	-	D	Yes
63.	Building 7 Auto Driveway 2 and Barrett Ave	City of Perris	Two-way stop	-	-	-	-	9.8	A	9.9	A	-	-	D	Yes

Notes: Delay Reported in Seconds per Vehicle
LOS = Level of Service
Unsatisfactory Level of Service

5.3.1 General Plan 2045 With Project Intersection Queueing Analysis

A queueing analysis was conducted at four study intersections during AM and PM peak hour involving ramps along the I-215. These intersections include Intersection #15 at I-215 Northbound Ramps and Placentia Avenue, Intersection #16 at I-215 Southbound Ramps and Placentia Avenue, Intersection #28 at I-215 Northbound Ramps and West Nuevo Road, and Intersection #29 at I-215 Southbound Ramps and West Nuevo Road. The required queuing length at the study area intersections were determined using 95-percentile queue length analysis. *Table 5.10* shows the queue lengths at each intersection approach. As shown in *Table 5.10*, queueing deficiencies were observed under General Plan 2045 With Project conditions, for the following approaches:

- #15. I-215 Northbound Ramps/Placentia Avenue – westbound right-turn lane (AM and PM peak hour)
- #28. I-215 Northbound Ramps/West Nuevo Road – northbound left-turn and right-turn lane (AM peak hour)
- #28. I-215 Northbound Ramps/West Nuevo Road – eastbound left-turn lane (AM peak hour)
- #28. I-215 Northbound Ramps/West Nuevo Road – westbound right-turn lane (AM and PM peak hour)
- #29. I-215 Southbound Ramps/West Nuevo Road – southbound left-turn lane (PM peak hour)
- #29. I-215 Southbound Ramps/West Nuevo Road – westbound left-turn lane (PM peak hour)

Even though the queue length for the SBL at intersection #16 exceeds the available storage length, it can still be safely accommodated. This is due to the fact that the queue falls within the additional 600 feet of storage provided beyond the striped storage lane that extends past the SBL lane. Similarly, an additional 260 feet of storage is provided beyond the NBR and NBL at intersection #28, an additional 360 feet of storage is provided for the SBL at intersection #29, ensuring that the additional queue can also be safely accommodated.

Table 5.10: General Plan 2045 With Project AM and PM Peak Hour Queueing Analysis

	General Plan 2045 Conditions								General Plan 2045 Plus Project Conditions								Difference							
	Northbound		Southbound		Eastbound		Westbound		Northbound		Southbound		Eastbound		Westbound		Northbound		Southbound		Eastbound		Westbound	
	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT
15. I-215 NB Ramps/Placentia Ave																								
Storage Length Per Lane	570	570	-	-	280	-	-	390	570	570	-	-	280	-	-	390	570	570	-	-	280	-	-	390
AM Queue Length Per Lane	65	295	-	-	55	-	-	345	80	485	-	-	55	-	-	590	15	190	-	-	0	-	-	245
PM Queue Length Per Lane	30	180	-	-	55	-	-	380	80	480	-	-	110	-	-	830	50	300	-	-	55	-	-	450
16. I-215 SB Ramps/Placentia Ave																								
Storage Length Per Lane	-	-	340***	340	-	320	315	-	-	-	340***	340	-	320	315	-	-	-	340	340	-	320	315	-
AM Queue Length Per Lane	-	-	75	25	-	35	85	-	-	-	260	30	-	35	115	-	-	-	185	5	-	0	30	-
PM Queue Length Per Lane	-	-	205	35	-	100	210	-	-	-	865	45	-	100	250	-	-	-	660	10	-	0	40	-
28. I-215 NB Ramps/W Nuevo Rd																								
Storage Length Per Lane	170*	170*	-	-	135	-	-	200	170*	170*	-	-	135	-	-	200	170*	170*	-	-	135	-	-	200
AM Queue Length Per Lane	655	520	-	-	1715	-	-	890	655	800	-	-	1715	-	-	960	0	280	-	-	0	-	-	70
PM Queue Length Per Lane	85	200	-	-	120	-	-	270	90	420	-	-	120	-	-	270	5	220	-	-	0	-	-	0
29. I-215 SB Ramps/W Nuevo Rd																								
Storage Length Per Lane	-	-	185**	185	-	N/A	315	-	-	-	185**	185	-	N/A	315	-	-	-	185**	185	-	N/A	315	-
AM Queue Length Per Lane	-	-	115	60	-	170	155	-	-	-	135	65	-	170	190	-	-	-	20	5	-	0	35	-
PM Queue Length Per Lane	-	-	585	150	-	530	475	-	-	-	1135	180	-	540	585	-	-	-	550	30	-	10	110	-

Notes:
Queueing Impacts
LT = Left-turn Lane, RT = Right-turn Lane
Queue length reported in feet for the AM(PM) peak periods and are rounded up to the nearest increment of 5 feet.
* There is an additional 260 feet of storage provided beyond the back of the striping storage pocket that extends past the NBR and NBL lanes.
** There is an additional 360 feet of storage provided beyond the back of the striping storage pocket that extends past the SBL lanes.
*** There is an additional 600 feet of storage provided beyond the back of the striping storage pocket that extends past the SBL lanes.

5.3.2 General Plan 2045 With Project Driveways Queueing Analysis

A full queueing analysis was conducted at all the Project driveways under the General Plan 2045 With Project Conditions to ensure that queueing remains within acceptable storage limits. Driveway access spacing is in accordance with Riverside County Standard Plan No. 114, and the driveway spacing measurements have been provided in Appendix F.

The required queuing length at the study area intersections were determined using 95-percentile queue length analysis. *Table 5.11a* shows the queue lengths at each Project driveway approach. *Table 5.11b* assess whether queues from these adjacent intersections would potentially block any project access points based on the followings:

- Queue length at adjacent study intersections compared to the distance to the closest project driveway, in order to assess whether queues from these adjacent intersections would potentially block any project access points.
- Queue length for through movements along Orange Avenue (from Barrett Avenue to Perris Boulevard) compared to the distance to the closest project driveway, in order to assess whether queues from through movements will stack back and block and driveways.

As shown in *Table 5.11a and Table 5.11b*, queueing deficiencies were not observed under General Plan 2045 With Project Conditions. Therefore, no alternative access configurations are needed, as the driveway queueing analysis indicates no queueing deficiencies or safety concerns at any Project driveways.

Table 5.11a: General Plan 2045 With Project AM and PM Peak Hour Project Driveways Queueing Analysis

	General Plan 2045 Plus Project Conditions																							
	Northbound		Southbound		Eastbound		Westbound		Northbound		Southbound		Eastbound		Westbound		Northbound		Southbound		Eastbound		Westbound	
	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT	LT	RT
	40. Commercial Driveway 1, 2 and Harvest Landing Way								50. Building 1 Truck Driveway and I-215 Frontage Rd								58. Building 6 Truck Driveway and I-215 Frontage Rd							
Storage Length Per Lane (ft)	N/A	226	N/A	46	N/A	424	N/A	224	N/A	165	200	N/A	N/A	N/A	N/A	300+	N/A	328	200	N/A	N/A	N/A	N/A	840
AM Queue Length Per Lane (ft)	N/A	25	N/A	25	N/A	0	N/A	0	N/A	25	25	N/A	N/A	N/A	N/A	25	N/A	0	25	N/A	N/A	N/A	N/A	25
PM Queue Length Per Lane (ft)	N/A	25	N/A	25	N/A	0	N/A	0	N/A	25	25	N/A	N/A	N/A	N/A	25	N/A	0	25	N/A	N/A	N/A	N/A	25
	41. Commercial Driveway 3, 4 and Harvest Landing Way								51. Building 2 Auto Driveway 1 and Orange Ave								59. Building 6 Auto Driveway 1 and Barrett Ave							
Storage Length Per Lane (ft)	226	226	40	40	160	245	160	343	N/A	39	N/A	N/A	N/A	213	N/A	N/A	N/A	707	200	692	40	40	100	100
AM Queue Length Per Lane (ft)	25	25	25	25	25	0	25	0	N/A	25	N/A	N/A	N/A	0	N/A	N/A	25	25	0	0	25	25	25	0
PM Queue Length Per Lane (ft)	25	25	25	25	25	0	25	0	N/A	25	N/A	N/A	N/A	0	N/A	N/A	25	25	0	0	25	25	25	0
	42. Commercial Driveway 5 and N. Perris Blvd								52. Building 2 Auto Driveway 2 and Orange Ave								60. Building 6 Auto Driveway 2 and Barrett Ave							
Storage Length Per Lane (ft)	N/A	N/A	N/A	507	N/A	41	N/A	N/A	38	38	N/A	N/A	N/A	203	100	N/A	N/A	692	160	782	39	39	134	134
AM Queue Length Per Lane (ft)	N/A	N/A	N/A	0	N/A	25	N/A	N/A	25	25	N/A	N/A	N/A	0	25	N/A	25	0	25	0	25	25	25	25
PM Queue Length Per Lane (ft)	N/A	N/A	N/A	0	N/A	25	N/A	N/A	25	25	N/A	N/A	N/A	0	25	N/A	25	0	25	0	25	25	25	25
	43. Commercial Driveway 6 and Barrett Ave								53. Building 2 Truck Driveway and I-215 Frontage Rd								61. Building 7 Truck Driveway and I-215 Frontage Rd							
Storage Length Per Lane (ft)	N/A	526	N/A	N/A	N/A	N/A	N/A	74	N/A	531	200	N/A	N/A	N/A	N/A	410	N/A	493	200	N/A	N/A	N/A	N/A	255
AM Queue Length Per Lane (ft)	N/A	0	N/A	N/A	N/A	N/A	N/A	25	N/A	0	25	N/A	N/A	N/A	N/A	25	N/A	0	25	N/A	N/A	25	N/A	N/A
PM Queue Length Per Lane (ft)	N/A	0	N/A	N/A	N/A	N/A	N/A	25	N/A	0	25	N/A	N/A	N/A	N/A	25	N/A	0	25	N/A	N/A	25	N/A	N/A
	44. Commercial Driveway 7 and N. Perris Blvd								54. Building 3 Auto Driveway and I-215 Frontage Rd								62. Building 7 Auto Driveway 1 and I-215 Frontage Rd							
Storage Length Per Lane (ft)	N/A	N/A	N/A	100	N/A	137	N/A	N/A	N/A	253	N/A	N/A	N/A	N/A	N/A	48	N/A	354	N/A	N/A	N/A	N/A	N/A	44
AM Queue Length Per Lane (ft)	N/A	N/A	N/A	0	N/A	25	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A	25	N/A	0	N/A	N/A	N/A	N/A	N/A	25
PM Queue Length Per Lane (ft)	N/A	N/A	N/A	0	N/A	25	N/A	N/A	N/A	0	N/A	N/A	N/A	N/A	N/A	25	N/A	0	N/A	N/A	N/A	N/A	N/A	25
	45. Commercial Driveway 8 and N. Perris Blvd								55. Building 3/4 Truck Driveway and I-215 Frontage Rd								63. Building 7 Auto Driveway 2 and Barrett Ave							
Storage Length Per Lane (ft)	160	N/A	N/A	100	N/A	144	N/A	N/A	N/A	204	200	N/A	N/A	N/A	N/A	176	N/A	N/A	44	44	N/A	N/A	N/A	244
AM Queue Length Per Lane (ft)	25	N/A	N/A	0	N/A	25	N/A	N/A	N/A	0	25	N/A	N/A	N/A	N/A	25	N/A	N/A	25	25	25	N/A	N/A	0
PM Queue Length Per Lane (ft)	25	N/A	N/A	0	N/A	25	N/A	N/A	N/A	0	25	N/A	N/A	N/A	N/A	25	N/A	N/A	25	25	25	N/A	N/A	0
	48. Building 1 Auto Driveway 1 and Orange Ave								56. Building 4/5 Auto Driveway and I-215 Frontage Rd															
Storage Length Per Lane (ft)	240	240	N/A	N/A	N/A	470	160	N/A	N/A	219	120	N/A	N/A	N/A	35	35								
AM Queue Length Per Lane (ft)	25	25	N/A	N/A	N/A	0	25	N/A	N/A	0	25	N/A	N/A	N/A	25	25								
PM Queue Length Per Lane (ft)	25	25	N/A	N/A	N/A	0	25	N/A	N/A	0	25	N/A	N/A	N/A	25	25								
	49. Building 1 Auto Driveway 2 and Orange Ave								57. Building 5 Truck Driveway and I-215 Frontage Rd															
Storage Length Per Lane (ft)	N/A	236	N/A	N/A	N/A	468	N/A	N/A	N/A	379	120	N/A	N/A	N/A	N/A	25								
AM Queue Length Per Lane (ft)	N/A	25	N/A	N/A	N/A	0	N/A	N/A	N/A	0	25	N/A	N/A	N/A	N/A	0								
PM Queue Length Per Lane (ft)	N/A	25	N/A	N/A	N/A	0	N/A	N/A	N/A	0	25	N/A	N/A	N/A	N/A	0								

Notes:
LT = Left-turn Lane, RT = Right-turn Lane
Queue length reported in feet for the AM(PM) peak periods and are rounded up to the nearest increment of 5 feet.

Table 5.11b: General Plan 2045 With Project AM and PM Peak Hour Project Driveways Queueing Analysis - Expanded

	General Plan 2045 Plus Project Conditions																																	
	Northbound			Southbound			Eastbound			Westbound			Northbound			Southbound			Eastbound			Westbound			Northbound			Southbound			Eastbound			Westbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
	46. Commercial Driveway 9 and Orange Ave												20. Orange Ave and Indian Ave												38. Barrett Ave and Harvest Landing Way											
Distance to Closest Project Access Point (ft)	41	N/A	41	105	N/A	105	206	206	206	383	383	383	N/A	N/A	N/A	N/A	N/A	N/A	160	160	N/A	N/A	470	470	N/A	174	174	1,253	1,253	N/A	N/A	N/A	N/A	391	N/A	391
AM Queue Length Per Lane (ft)	40	N/A	40	35	N/A	35	50	50	50	75	70	70	N/A	N/A	N/A	N/A	N/A	N/A	25	40	N/A	N/A	40	150	N/A	25	25	25	25	N/A	N/A	N/A	N/A	25	N/A	25
PM Queue Length Per Lane (ft)	25	N/A	25	165	N/A	165	85	125	125	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25	30	N/A	N/A	40	65	N/A	25	25	25	25	N/A	N/A	N/A	N/A	25	N/A	25
	47. Commercial Driveway 10 and Orange Ave												21. Orange Ave and Frontage Rd												39. Barrett Ave and I-215 Frontage Road											
Distance to Closest Project Access Point (ft)	N/A	N/A	32	N/A	N/A	N/A	N/A	413	413	N/A	N/A	N/A	N/A	334	334	200	N/A	N/A	N/A	N/A	N/A	642	642	642	N/A	N/A	N/A	990	990	N/A	N/A	N/A	N/A	225	N/A	225
AM Queue Length Per Lane (ft)	N/A	N/A	25	N/A	N/A	N/A	N/A	0	0	N/A	N/A	N/A	N/A	115	90	305	N/A	N/A	N/A	N/A	N/A	295	N/A	175	N/A	N/A	N/A	105	25	N/A	N/A	N/A	N/A	95	N/A	85
PM Queue Length Per Lane (ft)	N/A	N/A	25	N/A	N/A	N/A	N/A	0	0	N/A	N/A	N/A	N/A	65	30	405	N/A	N/A	N/A	N/A	N/A	360	N/A	280	N/A	N/A	N/A	160	25	N/A	N/A	N/A	N/A	105	N/A	60
	18. Orange Ave and Perris Blvd												23. Citrus Ave and Perris Blvd																							
Distance to Closest Project Access Point (ft)	730	730	730	N/A	N/A	N/A	383	383	383	N/A	N/A	N/A	N/A	N/A	N/A	625	625	N/A	N/A	N/A	N/A	N/A	N/A	N/A												
AM Queue Length Per Lane (ft)	380	410	50	N/A	N/A	N/A	150	180	185	N/A	N/A	N/A	N/A	N/A	N/A	210	375	N/A	N/A	N/A	N/A	N/A	N/A	N/A												
PM Queue Length Per Lane (ft)	530	360	260	N/A	N/A	N/A	165	250	365	N/A	N/A	N/A	N/A	N/A	N/A	155	615	N/A	N/A	N/A	N/A	N/A	N/A	N/A												
	19. Orange Ave and Barrett Ave												37. Perris Blvd and Harvest Landing Way																							
Distance to Closest Project Access Point (ft)	200	1,253	N/A	60	N/A	N/A	160	160	160	714	714	714	518	518	N/A	N/A	242	242	342	342	342	N/A	N/A	N/A												
AM Queue Length Per Lane (ft)	55	50	N/A	140	N/A	N/A	40	60	0	0	170	165	160	25	N/A	N/A	40	25	35	N/A	35	N/A	N/A	N/A												
PM Queue Length Per Lane (ft)	65	130	N/A	85	N/A	N/A	105	110	0	0	100	95	215	N/A	N/A	N/A	65	25	55	N/A	65	N/A	N/A	N/A												

Notes:
Queueing Impacts
LT = Left-turn Lane, TH = Thru Lane, RT = Right-turn Lane
Queue length reported in feet for the AM(PM) peak periods and are rounded up to the nearest increment of 5 feet.

5.3.3 General Plan 2045 With Project Roadway Segment Analysis

General Plan 2045 With Project Without Project roadway segments volumes were developed by adding the Project trips to the General Plan 2045 Without Project roadway segments volumes, with the adjustments noted in Section 5.1.2.

The LOS at the General Plan 2045 With Project study roadway segments were determined using the methodology described previously in *Section 2.3 Methodology*. The General Plan 2045 With Project LOS at the study roadway segments are shown in *Table 5.12*. As shown in *Table 5.12*, the following four (4) roadway segments would operate at an unsatisfactory LOS in the General Plan 2045 With Project condition:

- #3. Perris Blvd between Orange Ave and Citrus Ave
- #7. Nuevo Rd between Perris Blvd and I-215 NB Ramps
- #12. Perris Blvd between Citrus Ave and Nuevo Rd
- #14. Placentia Ave between I-215 NB Ramps and Indian Ave

Table 5.12: General Plan 2045 With Project Roadway Segment Level of Service

Segment	Classification[2]	# of Lanes Without Project	Roadway Capacity Without Project[2]	General Plan 2045 ADT[1]	V/C Ratio	LOS	# of Lanes Plus Project	Roadway Capacity Plus Project[2]	General Plan 2045 Plus Project ADT[1]	V/C Ratio	LOS	LOS Standard[2]	Unsatisfactory ?
1. Indian Ave between Water Ave and Orange Ave	Arterial	4	35,900	9,880	0.275	A	4	35,900	11,747	0.327	A	D	No
2. Orange Ave between Indian Ave and Perris Blvd	Arterial	4	35,900	10,611	0.296	A	4	35,900	19,376	0.540	A	D	No
3. Perris Blvd between Orange Ave and Citrus Ave	Arterial	6	53,900	43,121	0.800	D	6	53,900	56,749	1.053	F	D	Yes
4. Barrett Ave between Placentia Ave and Orange Ave	Collector	2	13,000	1,710	0.132	A	2	13,000	9,354	0.720	C	D	No
5. Perris Blvd between Placentia Ave and Orange Ave	Arterial	6	53,900	41,300	0.766	C	6	53,900	44,634	0.828	D	D	No
6. Perris Blvd between Rider St and Placentia Ave	Arterial	6	53,900	43,634	0.810	D	6	53,900	48,043	0.891	D	D	No
7. Nuevo Rd between Perris Blvd and I-215 NB Ramps	Arterial	6	53,900	50,226	0.932	E	6	53,900	59,070	1.096	F	D	Yes
8. I-215 Frontage Rd between Placentia Ave and Orange Ave	Arterial	4	35,900	10,093	0.281	A	4	35,900	23,500	0.655	B	D	No
9. I-215 Frontage Rd between Orange Ave and Nuevo Rd	Arterial	4	35,900	5,076	0.141	A	4	35,900	9,638	0.268	A	D	No
10. Orange Ave between I-215 Frontage Rd and Indian Ave	Arterial	4	35,900	5,355	0.149	A	4	35,900	15,405	0.429	A	D	No
11. Nuevo Rd between I-215 NB Ramps and I-215 SB Ramps	Arterial	6	53,900	35,372	0.656	B	6	53,900	40,099	0.744	C	D	No
12. Perris Blvd between Citrus Ave and Nuevo Rd	Arterial	6	53,900	49,397	0.916	E	6	53,900	61,712	1.145	F	D	Yes
13. Placentia Ave between I-215 NB Ramps and I-215 SB Ramps	Arterial	6	53,900	36,547	0.678	B	6	53,900	46,594	0.864	D	D	No
14. Placentia Ave between I-215 NB Ramps and Indian Ave	Arterial	6	53,900	51,765	0.960	E	6	53,900	71,034	1.318	F	D	Yes
15. Placentia Ave between Indian Ave and Perris Blvd	Arterial	6	53,900	27,969	0.519	A	6	53,900	33,086	0.614	B	D	No
16. Barrett Ave between Orange Ave and Harvest Landing Wy	Collector	2	13,000	-	-	-	2	13,000	8,380	0.645	B	D	No
17. Barrett Ave between Harvest Landing Wy and I-215 Frontage Rd	Collector	2	13,000	-	-	-	2	13,000	10,931	0.841	D	D	No
18. Harvest Landing Wy between Barrett Ave and Perris Blvd	Collector	4	25,900	-	-	-	4	25,900	7,855	0.303	A	D	No
19. Indian Ave between Placentia Ave and Water Ave	Arterial	4	35,900	9,880	0.275	A	4	35,900	11,747	0.327	A	D	No

Notes:
LOS = Level of Service
1 General Plan year ADT is calculated based on RIVCOM growth rates. All volumes are presented in PCE.
2 Classification, Number of Lanes under General Plan 2045 conditions, Roadway Capacity and LOS Standard from City of Perris General Plan Circulation Element.
Unsatisfactory Level of Service

Figure 5.9a: General Plan 2045 Intersection Lane Configuration and Traffic Control

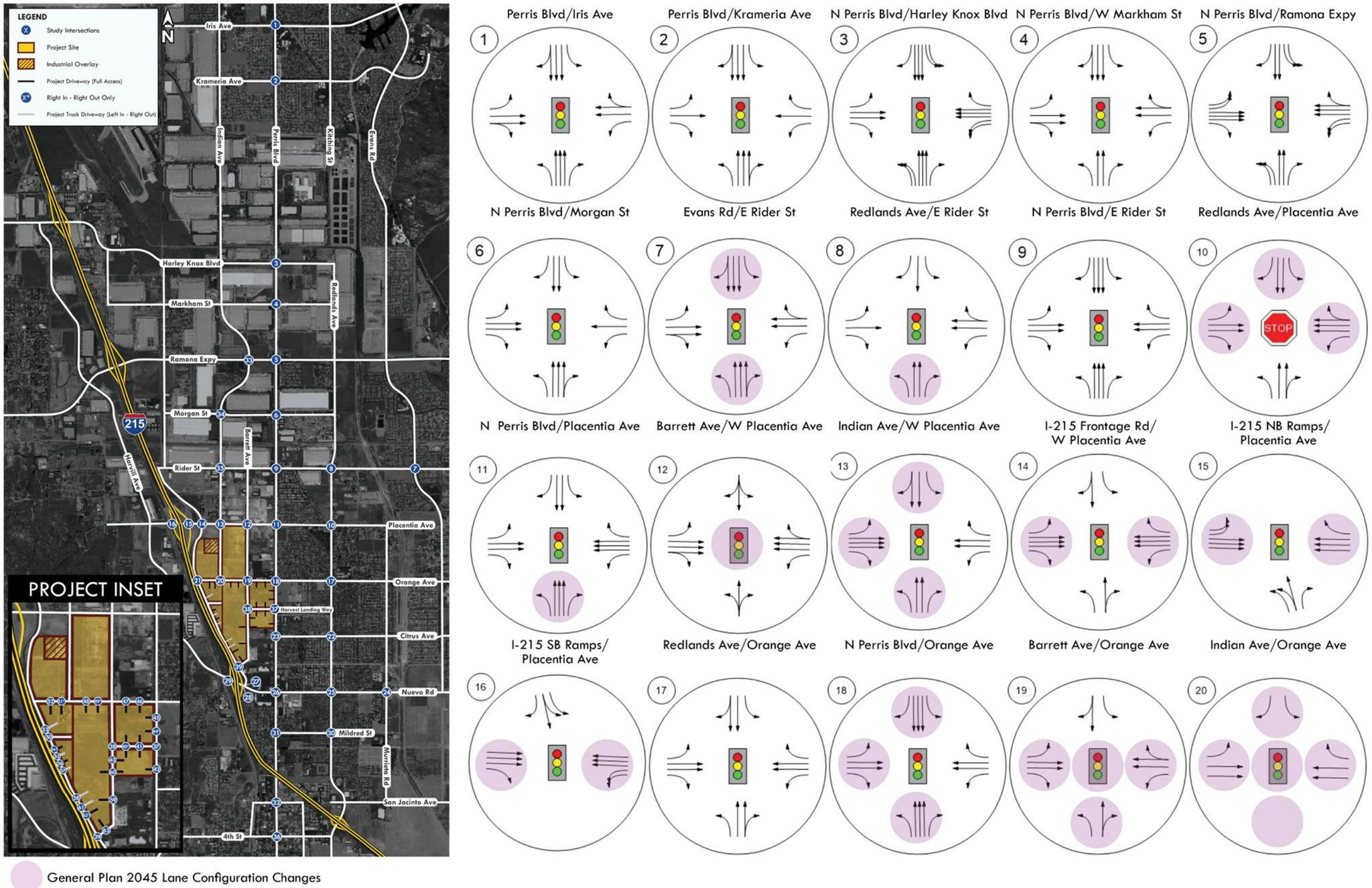


Figure 5.9b: General Plan 2045 Intersection Lane Configuration and Traffic Control (Continued)

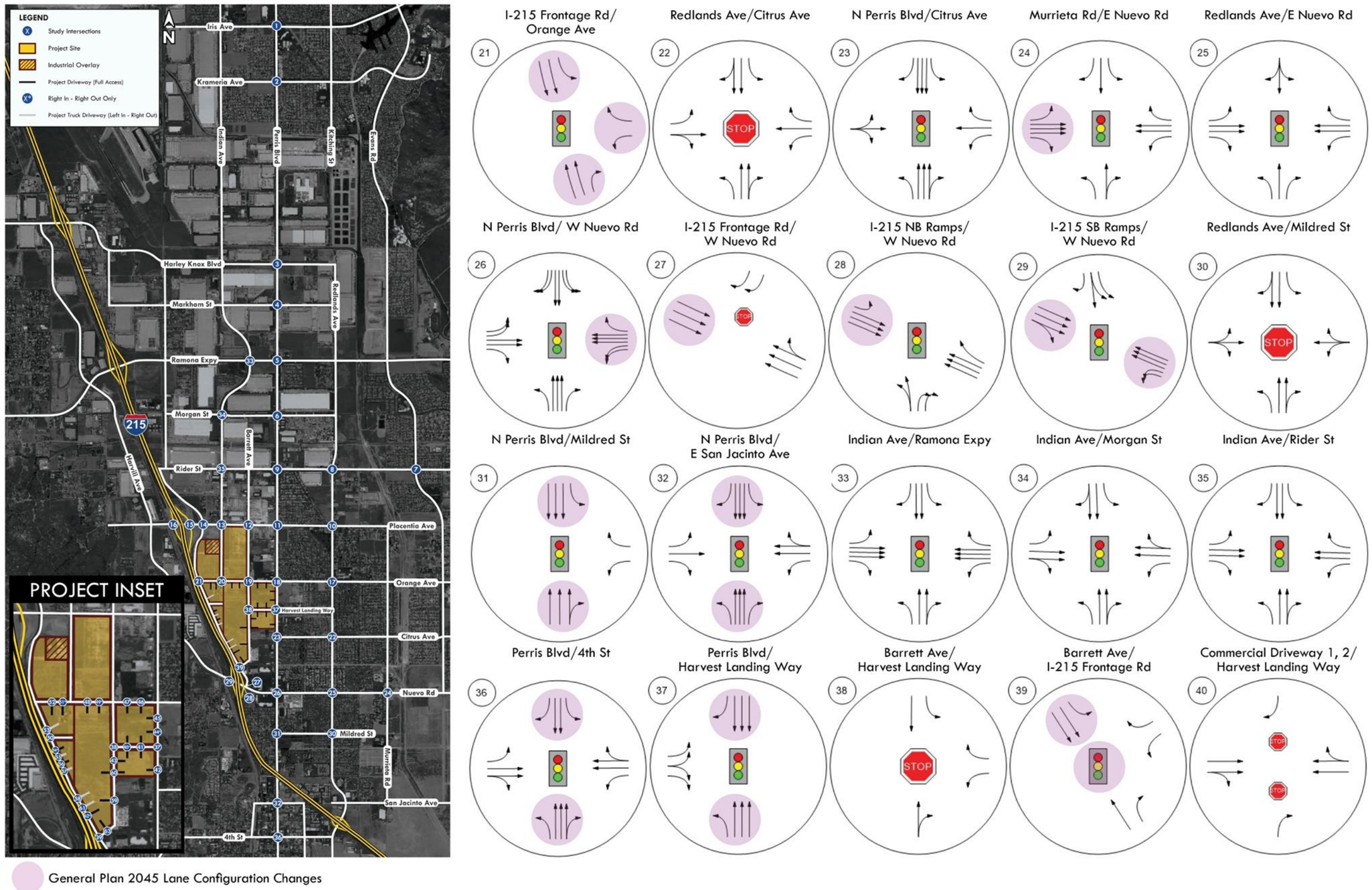
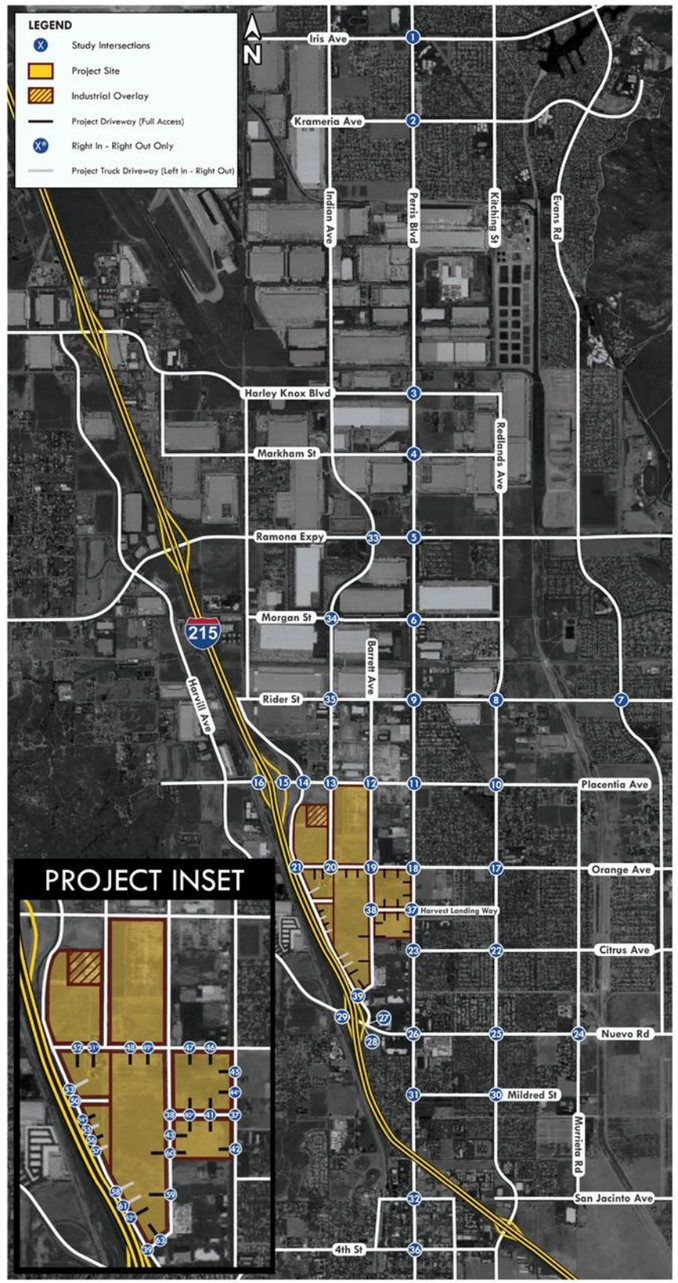


Figure 5.9c: General Plan 2045 Intersection Lane Configuration and Traffic Control (Continued)



General Plan 2045 Lane Configuration Changes

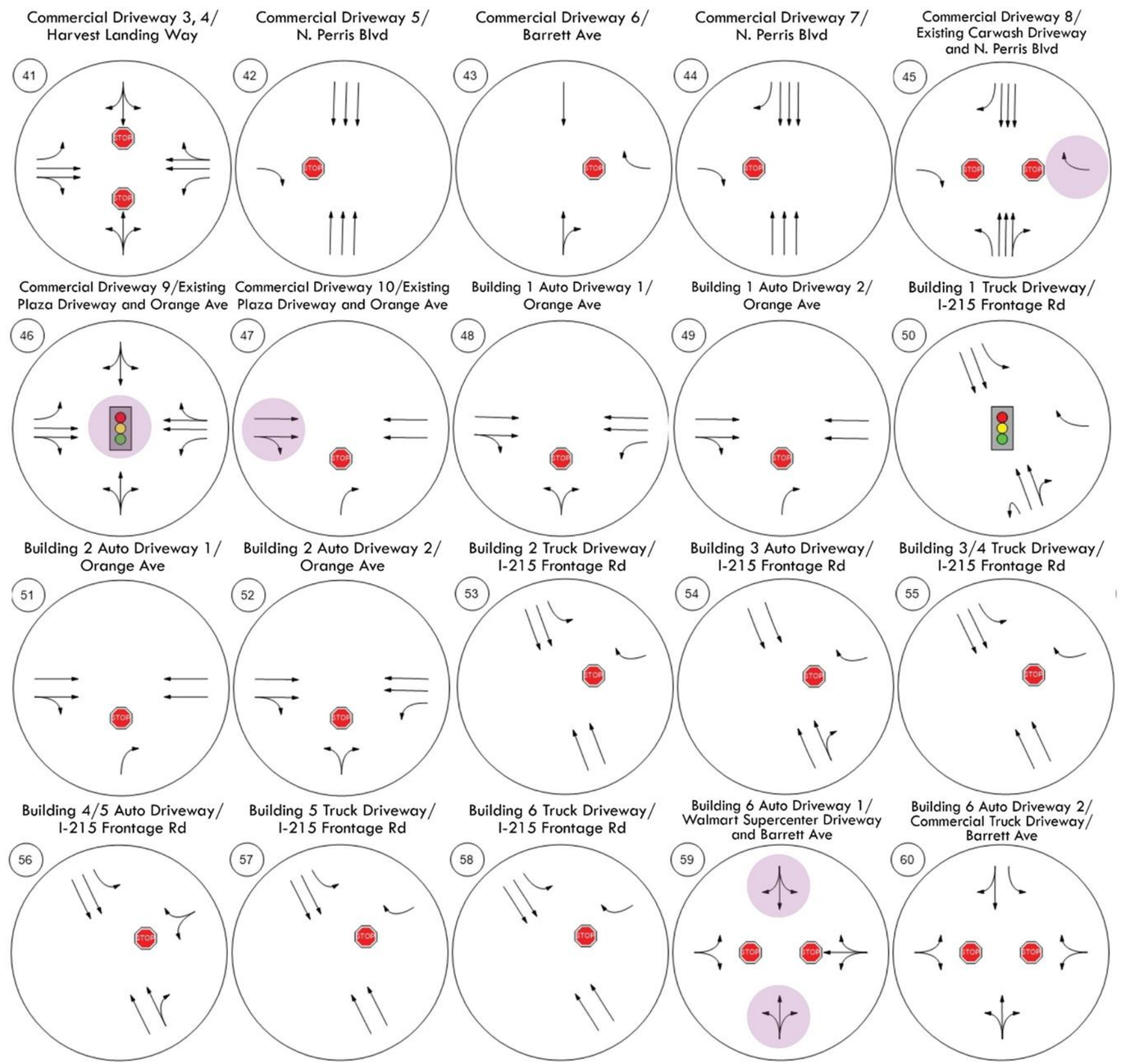
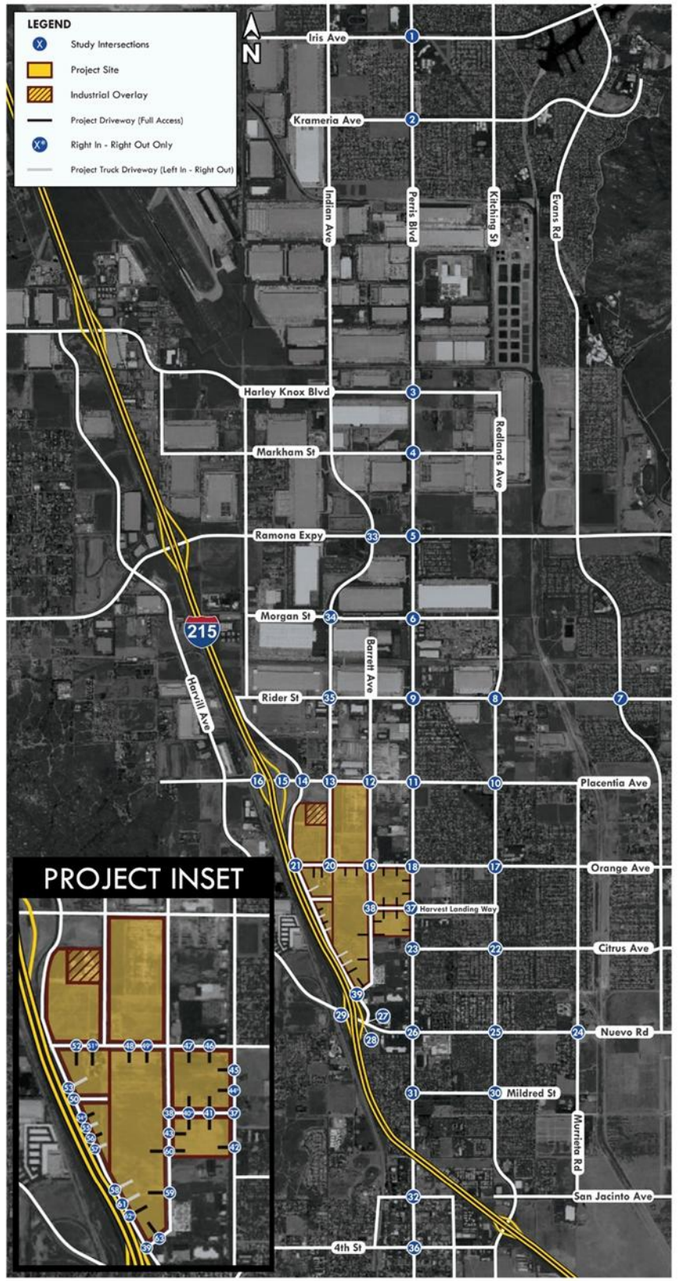


Figure 5.9d: General Plan 2045 Intersection Lane Configuration and Traffic Control (Continued)



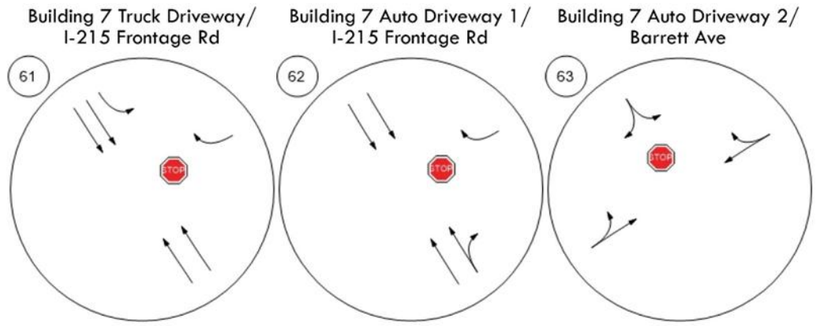
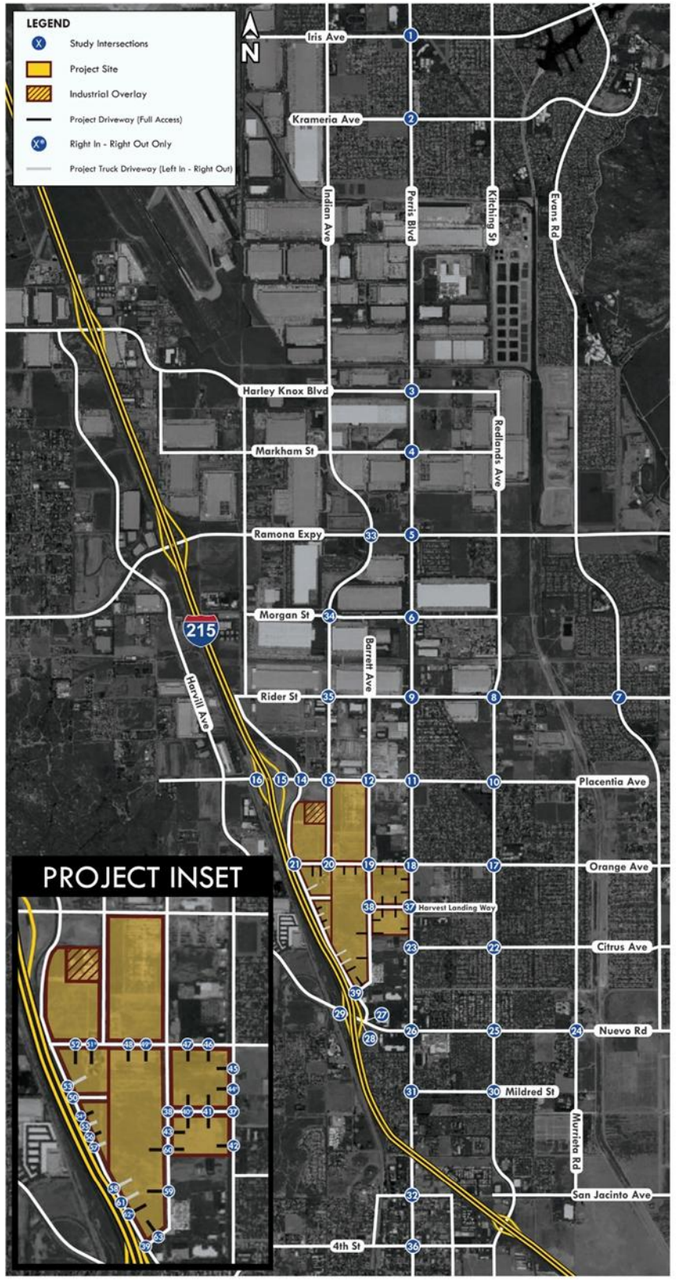


Figure 5.10a: General Plan 2045 With Project AM Peak Hour PCE Traffic Volumes



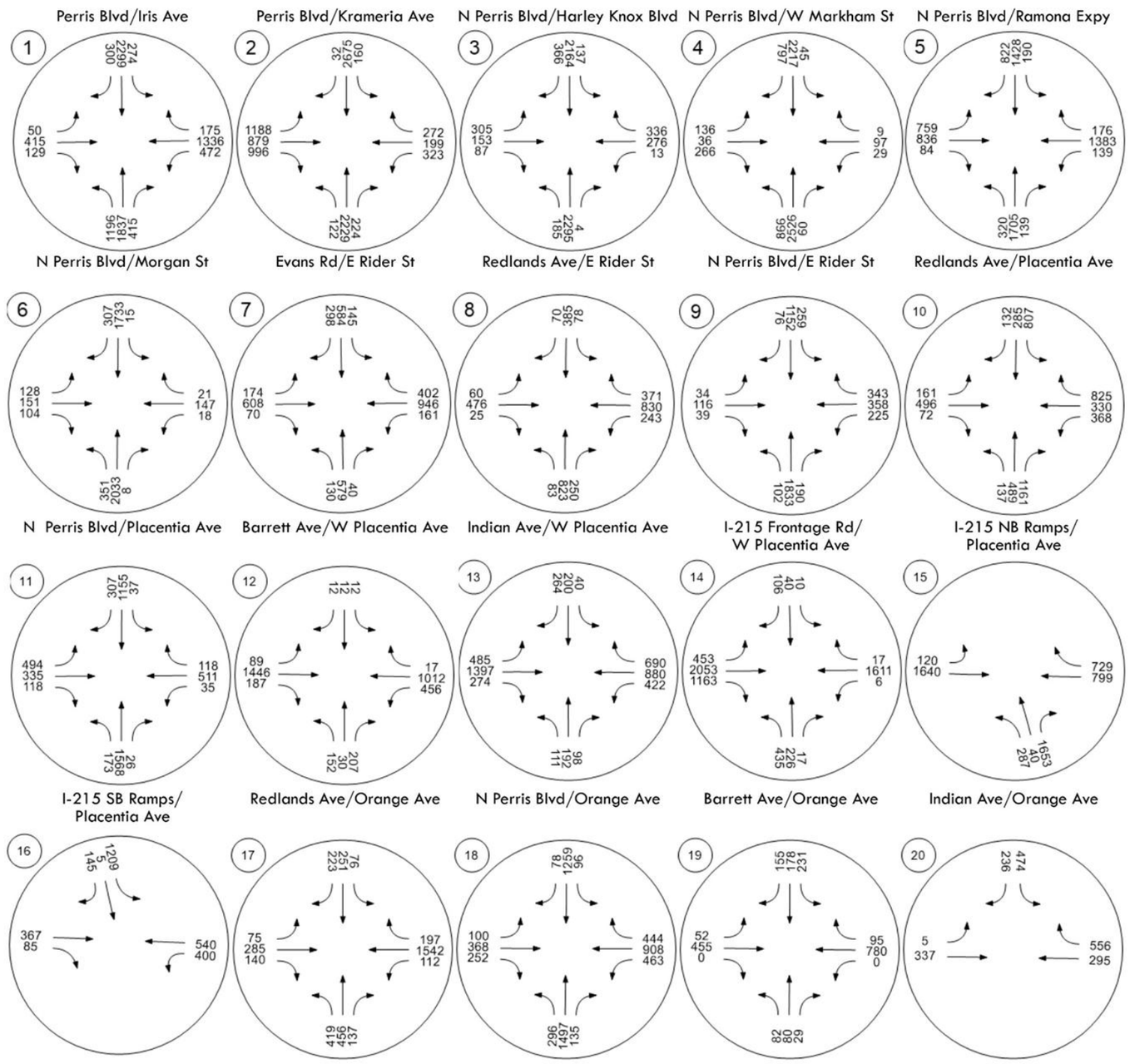


Figure 5.10b: General Plan 2045 With Project AM Peak Hour PCE Traffic Volumes (Continued)

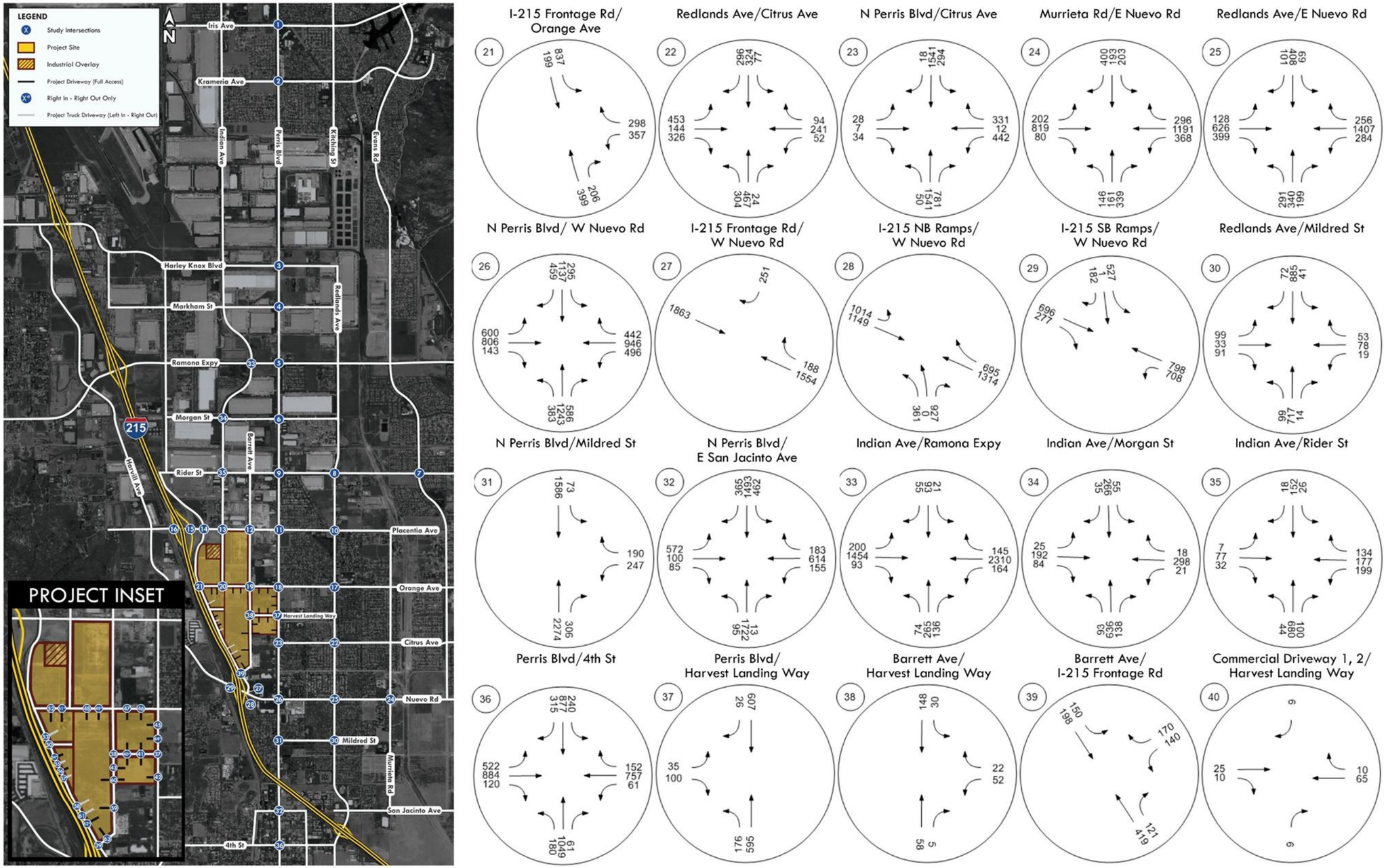


Figure 5.10c: General Plan 2045 With Project AM Peak Hour PCE Traffic Volumes (Continued)

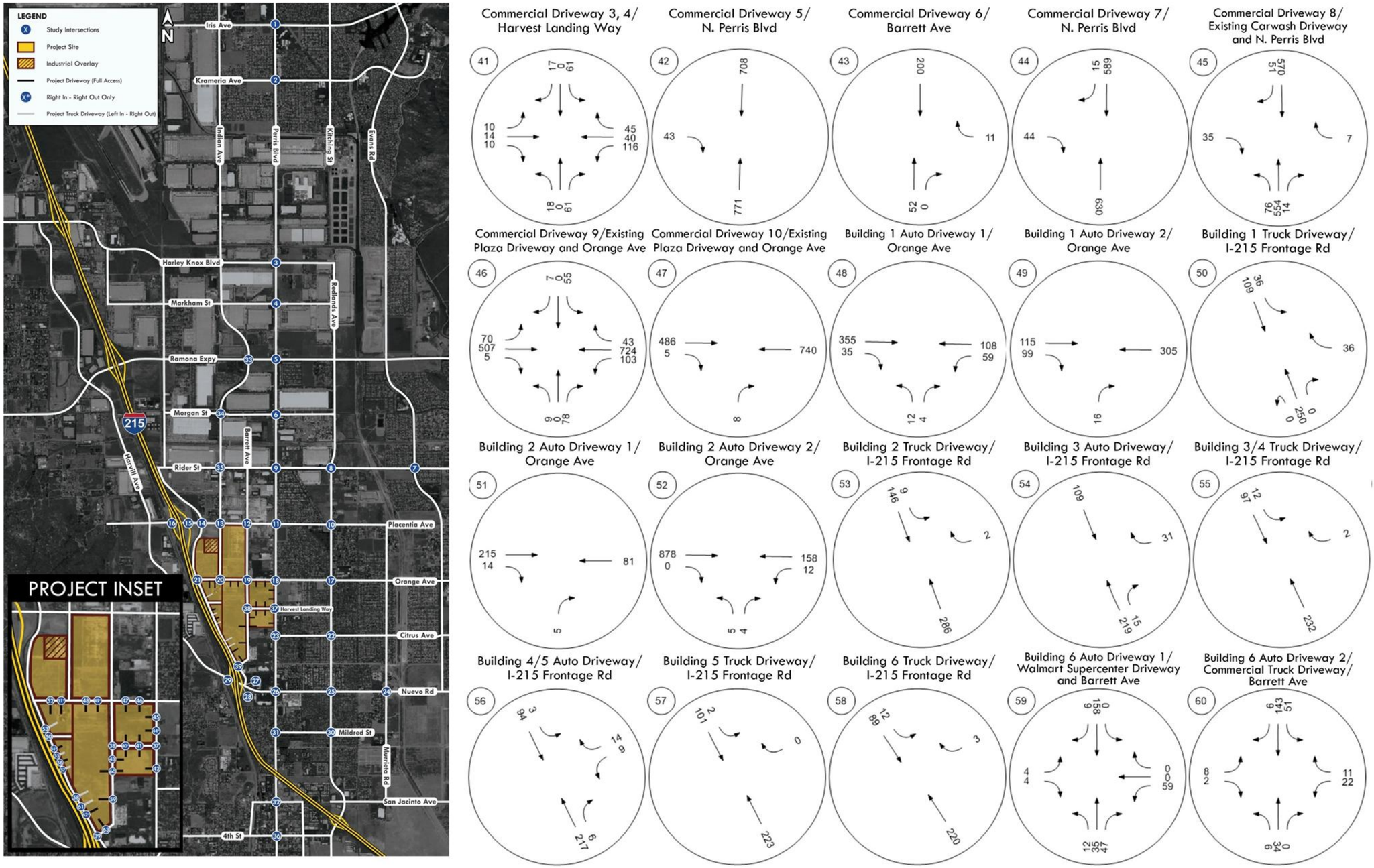
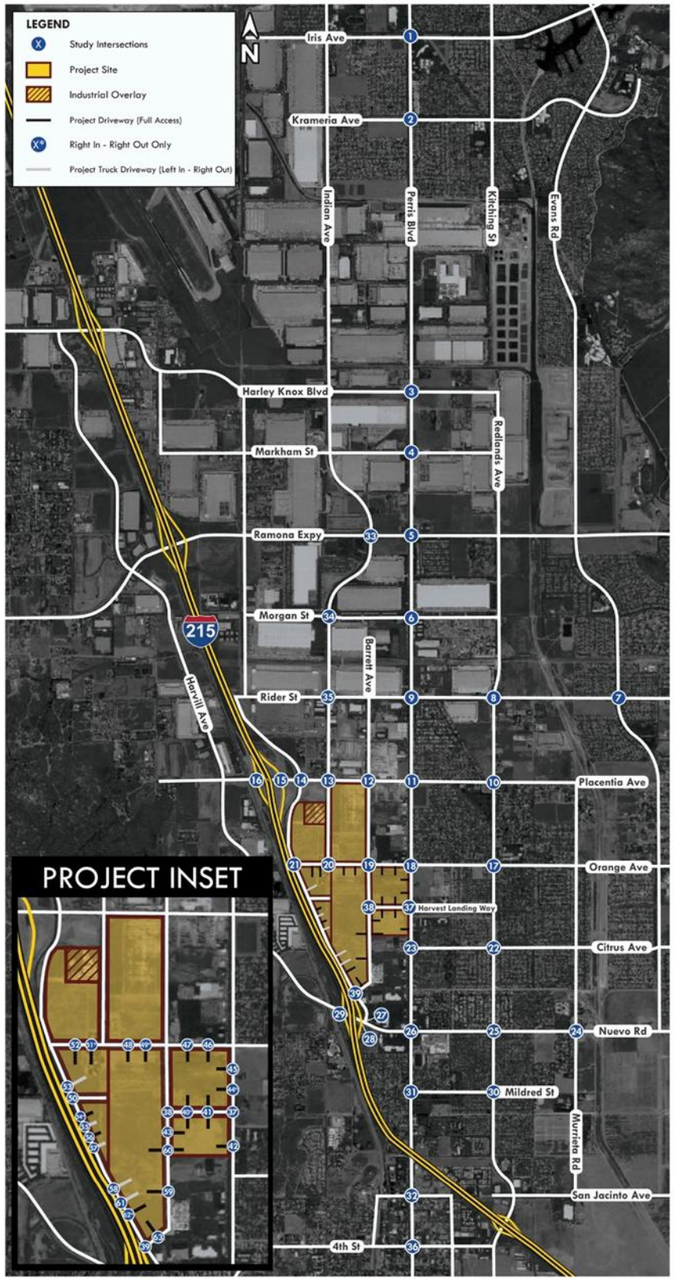


Figure 5.10d: General Plan 2045 With Project AM Peak Hour PCE Traffic Volumes (Continued)



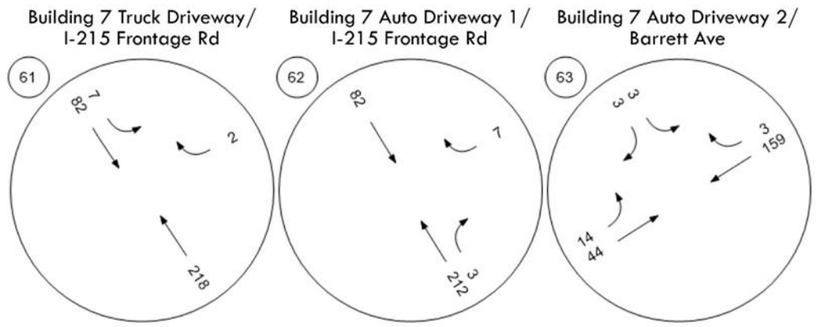
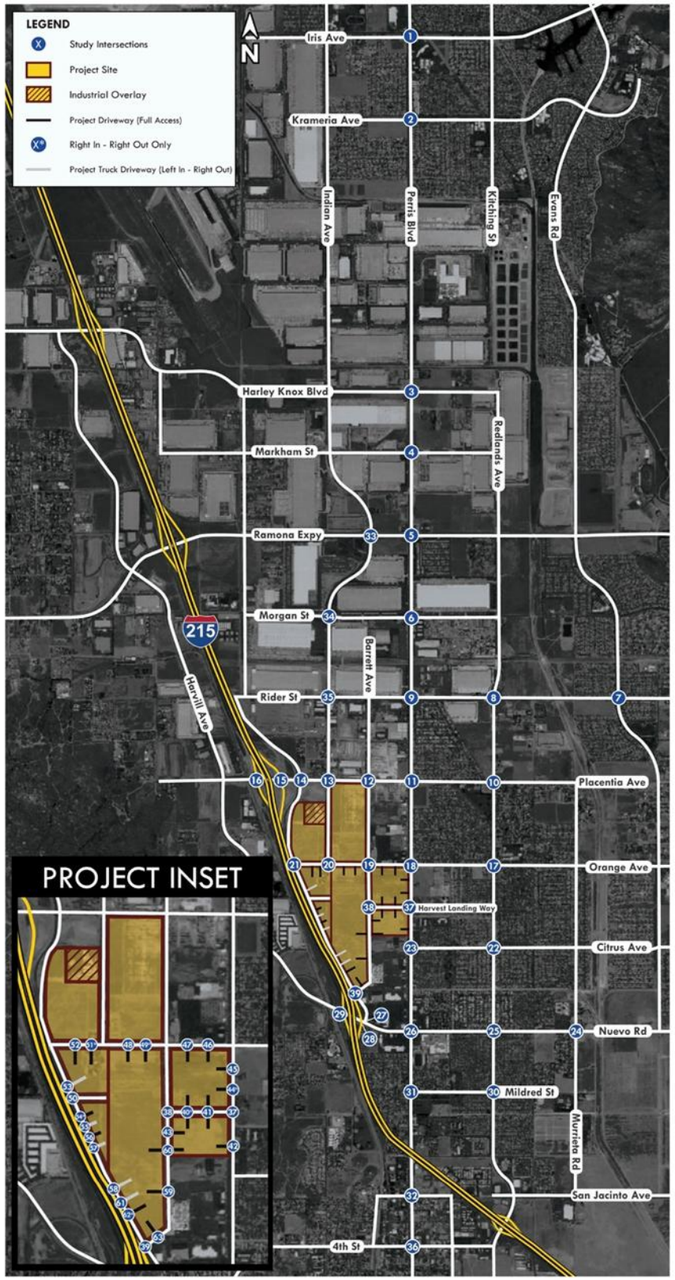


Figure 5.11a: General Plan 2045 With Project PM Peak Hour PCE Traffic Volumes



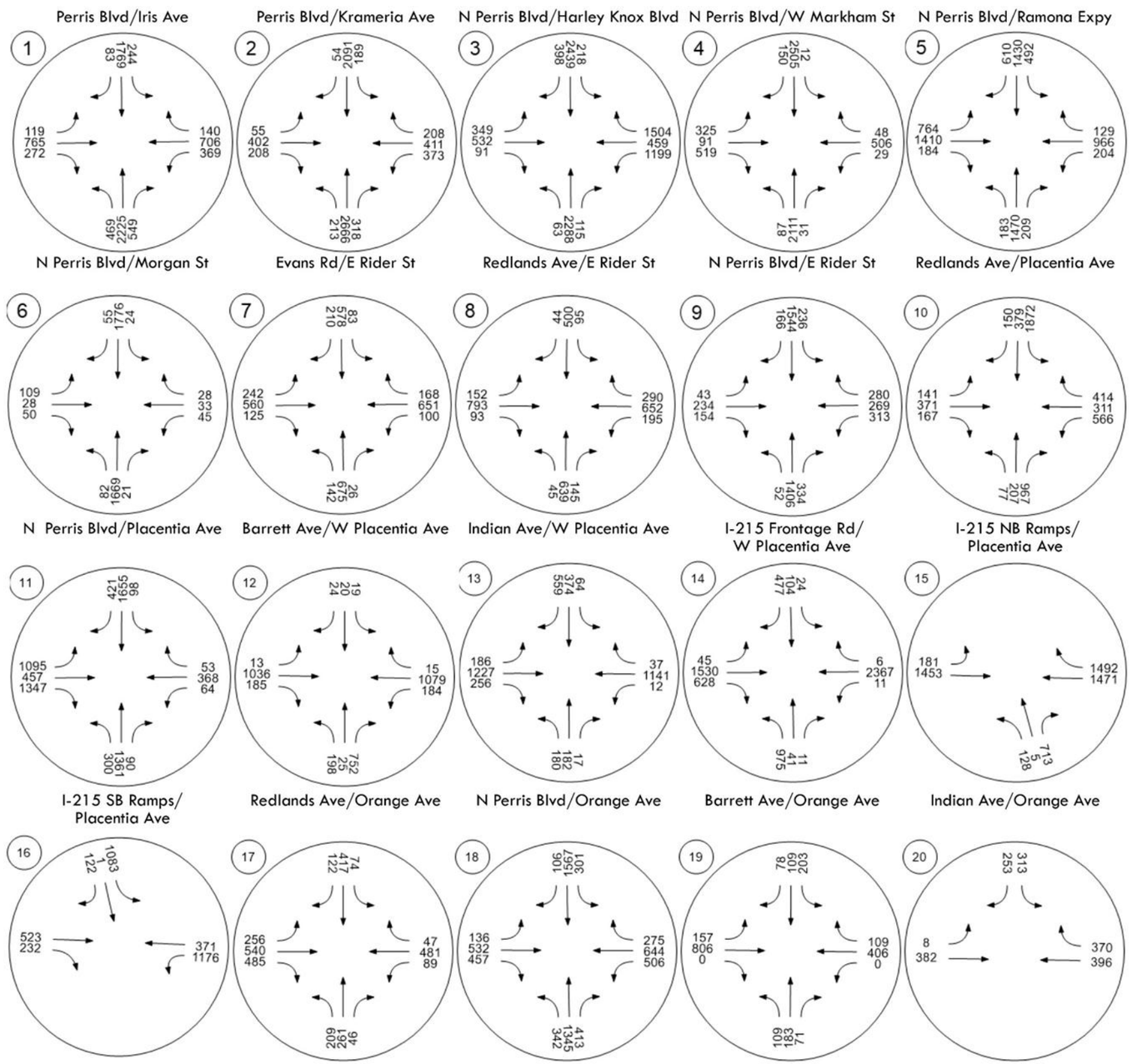


Figure 5.11b: General Plan 2045 With Project PM Peak Hour PCE Traffic Volumes (Continued)