6.0 HORIZON YEAR (2030) WITH ALTERNATIVE 2

This section summarizes the results of the Horizon Year (2030) conditions analysis within the Barrio Logan community taking into account the land use changes proposed under the Alternative 2 of the Community Plan Update.

Roadway Network

No roadway network changes are assumed to take place under this scenario, with the exception of the addition of a High Occupancy Vehicle (HOV) lane along the I-5 Corridor for both directions of traffic. The additional HOV lane is listed in Sandag's 2030 Regional Transportation Plan (RTP).

Traffic Volumes

The Horizon Year Average Daily Traffic (ADT) volumes on the roadway segments in the study area were derived from a City of San Diego traffic forecast model that incorporated the land use changes proposed under the Alternative 2 scenario. A copy of the forecast model is included in Appendix G.

Table 6-1 presents a more detailed trip generation summary for the community with the land uses included in the Alternative 2 of the Community Plan Update. As shown in the table, the land use designation of Alternative 2 would generate a total of approximately 152,430 average daily trips, including 11,131 (7,828 in and 3,303out) morning peak-hour trips and 15,939 (6,270in and 9,669 out) afternoon peak-hour trips.

Modeled forecast volumes experienced some minor refinements. In the process of calibrating the existing model, it was concluded that three post model adjustments should be made to the 2030 traffic models. Traffic volumes along Cesar Chavez Parkway between Newton Avenue and Main Street were reduced by 4,300 ADT to account for Newton Avenue not being in the model. Traffic volumes on 28th Street and 32nd between Main Street and Harbor Drive were increased by 4,000 ADT and 600 ADT, respectively, per calibration between base year model and actual traffic volume counts. Minor smoothing of traffic volumes were made to reflect the gross nature of model loadings from TAZs. Volumes for streets that were not in the traffic model were estimated applying a growth rate generally consistent with other facilities in the community. Resulting daily traffic volumes for the Adopted Community Plan are depicted in **Figure 6-1**.

To estimate the turning movement volumes at the study intersections, the existing turning movements at each respective study intersection were factored up based on the projected Average Daily Traffic (ADT) volumes along each segment shown in the model plot. Each respective movement was derived using an iterative approach that balances the inflows and outflows for each approach. The input values include the existing turning movement volumes and future year peak-hour approach and departure volumes along each leg of the intersection. The future peak-hour approach volumes would be estimated by applying the existing peak-hour factor (K-factor) and directional distributional percentage (D-factor) to the future ADT volumes along each approach. A more detailed description of the methodology used to forecast turning movement volumes is contained in National Cooperative Highway Research Program (NCHRP) 255 Highway Traffic Data for Urbanized Area Project Planning and Design, Chapter 8. An Excel model computes the forecast turning volumes from existing turning movement volumes and forecasted approach and departure volumes by the techniques described in NCHRP 255. A copy of the NCHRP 255 Report and excel calculation worksheets are included in Appendix H. **Figure 6-2** displays the Horizon Year peak-hour turning movements used in the analysis of Alternative 2.

TRIP GEN	ERATION		ABLE 6-1 IARY (ALTE	RNATIV	'E 2 - T	OTAL)			
		1		AN	/I Peak-H	Iour	F	M Peak-I	Hour
Land Use	Unit	s	Daily Trips	In	Out	Total	In	Out	Total
ACTIVE PARK	9.10	acre	398	0	16	16	0	32	32
ELEMENTARY SCHOOL (stu)	529.00	stu	1,539	286	191	477	117	175	292
FAST FOOD REST. (ksf)	19.50	ksf	13,675	328	219	547	547	548	1,095
FIRE OR POLICE STATION	1.00	site	229	31	3	34	3	31	34
HEAVY INDUSTRY (ksf)	3,490.30	ksf	14,140	1,400	155	1,555	339	1,358	1,697
INACTIVE USE	10.50	acre	0	0	0	0	0	0	0
JUNIOR COLLEGE (ksf)	70.00	ksf	1,295	140	15	155	31	73	104
LIGHT INDUSTRY (ksf)	1,461.70	ksf	23,390	2,316	257	2,573	561	2,246	2,807
LOW RISE OFFICE(3957)(ksf)	249.50	ksf	3,347	331	37	368	80	322	402
LOW RISE OFFICE(3982)(ksf)	246.60	ksf	3,327	329	37	366	80	319	399
LOW RISE OFFICE(3988)(ksf)	31.30	ksf	794	79	8	87	19	76	95
LOW RISE OFFICE(FT3917)(ksf)	258.50	ksf	3,467	406	45	451	97	388	485
LOW RISE OFFICE(FT3921)(ksf)	162.90	ksf	2,435	285	32	317	68	273	341
LOW RISE OFFICE(FT3985)(ksf)	15.70	ksf	414	48	6	54	12	46	58
LUMBER STORE (mtro)(ksf)	0.00	ksf	0	0	0	0	0	0	0
MARINA (CCDC)	0.00	acre	0	0	0	0	0	0	0
MARINE TERMINAL	0.00	acre	0	0	0	0	0	0	0
MILITARY USE (Gate 9 - site)	0.00	site	0	0	0	0	0	0	0
MULTI-FAMILY (BL)	61.00	du	373	3	8	11	16	10	26
MULTI-FAMILY(BL)(over 20DU)	3,602	du	21,747	348	1,392	1,740	1,370	588	1,958
NEIGHBORHOOD SHOP CNT (ksf)	175.10	ksf	20,813	500	333	833	1,146	1,143	2,289
OTHER HEALTH CARE (ksf)	112.70	ksf	5,610	269	67	336	168	393	561
OTHER PUBLIC SERVICE	0.20	acre	58	5	0	5	2	5	7
OTHER TRANSPORTATION	5.10	acre	433	42	19	61	19	46	65
PARKING	0.50	cre	0	0	0	0	0	0	0
RAIL STATION (BL)	0.60	acre	181	18	7	25	8	19	27
REGIONAL COMM.(Mtro)(ksf)	0.00	ksf	0	0	0	0	0	0	0
SINGLE FAMILY (BL)	56	du	493	8	30	38	35	15	50
SPECIALTY COMM.(mtro)(ksf)	0.00	ksf	0	0	0	0	0	0	0
STREETFRONT COMMERCIAL (ksf)	843.80	ksf	33,813	608	405	1,013	1,523	1,519	3,042
WAREHOUSING (ksf)	90.60	ksf	459	48	21	69	29	44	73
WHOLESALE TRADE	0.00	acre	0	0	0	0	0	0	0
Total			152,430	7,828	3,303	11,131	6,270	9,669	15,939

 I. du = Dwelling Unit; stu = stuuents, ssi - i nousanu square

 K:SND_TPT0/095707000/Excel[707000TG.xlsm]Alt 2 Totals (LU)



Barrio Logan Co	mmunity Plan	Update					
5 138 /81 ⇒ 270 /510 ⇒ 43 /36 16th St	 № 112 / 119 ⇔ 299 / 493 ☆ 23 / 0 Commercial St 	2 36 /25 ⇒ 36 /25 ⇒ 65 /125 16th St	∾ 34 / 25 ⇔ 495 / 458 ☆ 3 / 3 National Ave	 5 60 / 40 ⇔ 40 / 23 ∞ 16 / 6 Sigsbee St 	∾ 36 / 28 ⇔ 377 / 254 ∞ 19 / 9 National Ave	 8 17 /8 2 79 /38 ∞ 33 /16 Sigsbee St 	 51 / 23 ⇔ 80 / 50 ≥ 15 / 9 Newton Ave
17 / 68	15 /25 ≈ 360 /700 ⇔ 18 /28 ∿	40/91 ⊘ 194/347 ⇔ 40/31 ∿	40 /61 ≈ 34 /41 ⇔ 12 /7 ≌	11 / 35	65 /78 a 26 /58 a 58 /13 a	6/9 ở 48/50 ⇔ 19/29 ∿	24 /20 & 111 /91 & 34 /12 &
5 3 / 2 ⇔ 96 / 60 ∞ 31 / 20 Sigsbee St	∾ 61/31 ⇔ 8/0 ∞ 31/38 Main St	 3. 100 / 70 2. 100 / 90 3igsbee St 	∾ 20 / 100 ⇔ 1650 / 750 Harbor Dr	 A7 / 39 A7 / 39 233 / 109 256 / 272 258 off:Ramp 	⇔ 209 / 160 ஜ 88 / 40 Logan Ave	8 23 / 11	 is 66 / 77 is 432 / 358 is 239 / 113 National Ave
3/4 ⊘ 8/2 ⇔ 6/13 ∿	5 / 0 2 97 / 98 5 24 / 12 2	60 / 160		175/532 ⇔ 5 24/70 ∿ 9 8 8	30 / 56 2 69 / 123 2	8/19	4/9 2 30/43 5 50/132 2
6 41 /12 ⇔ 156 /94 ∞ 56 /46 Beardstey St	© 15 / 19 ⇔ 82 / 93 ⊉ 29 / 13 Newton Ave	0 8 52 /17 8 57 /39 8 275 /144 Beardslay St	is 76 / 79 ⇔ 109 / 33 2 163 / 78 Main St	20 /30 /30 /30 /30 /86ardsley St	∿ 30 / 20 ⇔ 1580 / 820 Harbor Dr	23 353 / 34 / 44	 5. 205 / 167 ⇔ 278 / 173 ☆ 615 / 517 Kearney Ave
18 / 7	13./5 ∞ 23./71 ⇔ 19./37 ≌	15/22 <i>a</i> 74/64 ⇒ 4/4 ⊗	2 /0 ≈ 8 /25 ⇔ 52 /109 ≈	22 / 95			257 / 383 & 259 / 343 &





NOT TO SCALE

FIGURE 6-2

Barrio Logan Co	mmunity Plan	Update				
20 / 51 / 51 / 51 / 51 / 51 / 51 / 51 / 5	 № 76 / 90 ⇔ 350 / 350 ∞ 100 / 100 Logan Ave 	№ 310 / 410 № ⇔ 765 / 550 € 60 / 120 ∞ 66 of / 120 € € PKwy PKwy №	 № 110 / 275 ⇔ 350 / 270 № 120 / 110 National Ave 	15 150 / 60 09 / 120 52 / 610 ∞ 825 / 610 ∞ 100 / 170 ∞ 00 / 170 ∞ 00 / 170 ∞ 00 / 100 ∞ 00 / 100 ∞ 00 / 100 ∞ 00 / 100 ∞ 00 / 100 ∞ 00 / 100 00 Newton Ave	2 2 2 2 2 2 2 2 2 2 2 2 2 2	 № 190 / 270 ⇔ 350 / 250 ∞ 70 / 70 Main St
140 / 130	100 /140 2 300 /506 7 300 /700 2	190 / 300	100 /120	80 / 120	150 / 120	85 / 85 240 74 240 75 240 75 240 75 240 75 25 240 75 25 25 25 25 25 25 25 25 25 25 25 25 25
 510 / 314 8 510 / 314 2 8 3 / 30 2 77 / 33 Cesar Chavez Pkwy 	 № 99 / 43 ⇔ 1056 / 467 2 80 / 30 Harbor Dr 	18 dumarka B On-Kam	∾ 80 / 69 ⇔ 125 / 156 Logan Ave	19 667 / 67 67 / 67 67 67 / 67 67 67 / 67 67 67 67 67 67 67 67 67 67 67 67 67 6	8 28/70 0 ⇔ 18/23 ∞ 9/45 Evans St	 № 28 / 24 ⇔ 225 / 191 ☆ 38 / 34 National Ave
109 / 590	10 / 50 2 14 / 63 5 27 / 35 2	475 / 891 ⊘ 182 / 523 ⇔ m 2 / 8 ∾ 40 ¥e	0/11 5 2/2 U 2/3 2	126 / 302 ⇔	16 / 35	27 / 12 % 48 / 18 % 25 / 62 %
5 37 /21	s 30 / 27 ⇔ 63 / 70 ⊉ 16 / 27 Newton Ave	52 34 / 9 د 66 / 85 Evans St	∿ 75 / 68 ⇔ 427 / 284 Main St	23 52 52 52 52 52 52 52 52 52 52	54 121 / 109 5 121 / 32 6 124 / 98 6 123 / 33 5 6 7 7 8 7 <	s 106 / 105 ⇔ 101 / 70 ⊉ 48 / 21 National Ave
23 / 24	27 /7 ~ 58 /47 ⁻ 31 /28 ⁻	24 / 6		212 230 2 0 0 0 0 101 / 124 0 2 0 101 / 101 0 0 366 (4443 0 0 143 0 101 / 101 174 / 124 0 0 0 124	78 / 166	7 /13 ⊘ 107 /208 ⇔ 16 /30 ⊗



The northbounf right-turn volumes for Logan Avenue/SR-75 and Cesar Chavez Parkway intersection include the vehicles turning north from Cesar Chavez Parkway using the free northbound right-turn lane. The intersection analysis did not include a reduction for these volumes.

Legend X / Y = AM / PM PEAK HOUR TURNING VOLUMES

Horizon Year (2030) Peak-Hour Volumes (Alternative 2) (cont.)





FIGURE 6-2.1

K:\SND_TPTO\095707000\Excel\[707000TA01.xlsx]Turn 32 Adj-Model2 Figure 13-24

Barrio Logan Co	mmunity Plan	Update				
5 39 /21 ⇔ 113 /76 ∞ 20 /21 Sampson St	∾ 37 / 33 ⇔ 79 / 73 ☆ 15 / 0 Newton Ave	205 / 105 ⇔ 59 / 27 ∞ 10 / 8 Sampson St	∾ 16 / 8 ⇔ 282 / 113 ஜ 53 / 27 Main St	27 99/ 25 99/ 26 20/ 27 20/ 26 20/ 26 20/ 26 20/ 26 20/ 26 20/ 26 20/ 26 20/ 26 20/ 26 20/ 27 20/ 26 20/ 26 20/ 27 20/ 26 20/ 26 20/ 26 20/ 26 20/ 27 20/ 26 20/ 27 20/ 26 20/ 27 20/ 26 20/ 27 20/ 26 20/ 26 20/ 27 20/ 27 20/ 27 20/ 27 20/ 27 20/ 27 20/ 26 20/ 27 20/ 20/ 20 20/ 20/ 20/ 20 20/ 20/ 20/ 20/ 20/ 20/ 20/ 20/ 20/ 20/	25 37 /42 ⇔ 39 /17 ∞ 4 /4 Sicard St	∾ 3 / 1 ⇔ 164 / 125 ∞ 27 / 8 National Ave
23 / 35 Ø 92 / 117 ↔ 17 / 24 S	7 /13	81 / 134	52 /63 & 31 /46 ⁽¹⁾ 35 /49 ⁽²⁾	10 / 56	20 / 41	48 / 34 2 49 / 45 5 12 / 17 2
29 8 15 / 20 8 45 / 80 8 25 0 / 91 26th St 26th St	∾ 48 / 54 ⇔ 222 / 123 ⊉ 36 / 35 National Ave	30	 ⇔ 279 / 239 ₂ 42 / 31 National Ave 	31 ∞ + + + + + + + + + + + + + + + + + + +	25 / 169 / 80 ⇒ 25 / 10 ⇒ 12 / 16 Schey St	∾ 17 / 39 ⇔ 1473 / 558 Harbor Dr
26 / 35	31 / 54 2 55 / 68 4 15 / 34 2	151/373 ⇔ terr 7/14 ∿ 50 88 94	28 / 37 28 149 / 296 23	11/14	126 / 208	
8 307 /102 8 213 /210 8 118 /195 28th St	 № 126 / 241 ⇔ 599 / 406 ☆ 186 / 448 National Ave 	24 380 /500 /350 /350	ıs 130 / 80 ⇔ 80 / 70 ⊉ 50 / 70 Boston Ave	35 0600000000000000000000000000000000000	22/13 ⇔ 15/12 ∞ 339/480 28th St	 № 115 / 255 ⇔ 843 / 491 ☆ 18 / 18 Harbor Dr
106 / 94	33 / 18 ∞ 102 / 98 ⇔ 82 / 163 ∞	250 / 350	90 / 50	190 / 270	120/300 ⊘ 580/1120 ⇔ 4/2 ∿	0 / 10 2 6 / 133 7 2 / 0 2



<u>Legend</u> X / Y = AM / PM PEAK HOUR TURNING VOLUMES





FIGURE 6-2.2

Barrio Loga	an Co	mmunity Plan	Update					
37	29th St	 is 96 / 132 ⇔ 107 / 86 ≥ 20 / 20 Boston Ave 	85 41 /68 ⇔ 83 /61 ∞ 44 /148 32nd St	 № 100 / 132 ⇔ 548 / 407 ☆ 314 / 207 Main St 	39 80 (2000) 80 (20	10 ¹ / ₁ , 50 / 205 0 51 / 50 / 205 0 5		 № 390 / 460 ⇔ 756 / 434 ☆ 300 / 40 Harbor Dr
104 / 151	ଅ ⇔ ଅ	6 /10	36 / 63 ⊘ 153 / 733 ⇒ 200 / 139 ∿	110 /193	65 / 115 2 25 / 115 2 170 / 80 5 80 /130 S	70/140 5 215/360 0 125/760 0 290/240 2	140 / 340	30 /70 2 160 /690 4 30 /140 2
	⊿ 108 / 120 I-15 Ramps	s, 107 / 154 ⇔ 516 / 373 Main St						
	Ø ⇔							





FIGURE 6-2.3

Horizon Year (2030) Peak-Hour Volumes (Alternative 2) (cont.)

Intersection Analysis

Table 6-2 displays the LOS analysis results for the study intersections under Horizon Year with the Barrio Logan Community Plan Update conditions for Alternative 2 scenario. As shown in the table, all intersections would operate at LOS D or better during both peak-hour periods, with the exception of the following sixteen intersections:

- National Avenue and 16th Street (LOS F during both peak-hour periods);
- Harbor Drive and Sigsbee Street (LOS F during both peak-hour periods);
- Logan Avenue and Beardsley Street/I-5 SB off-ramp (LOS F during the afternoon peak-hour period);
- National Avenue and Beardsley Street (LOS E and LOS F in the morning and afternoon peakhour periods, respectively);
- Harbor Drive and Beardsley Street (LOS F during both peak-hour periods);
- Logan Avenue and Cesar Chavez Parkway (LOS E in the afternoon peak-hour period);
- Harbor Drive and Cesar Chavez Parkway (LOS F both peak-hour periods);
- Logan Avenue and Sampson Street (LOS F during both peak-hour periods);
- Harbor Drive and Schley Street (LOS F in the morning peak-hour period);
- National Avenue and 28th Street (LOS E both peak-hour periods);
- Boston Avenue and 28th Street (LOS E in the afternoon peak-hour period);
- Harbor Drive and 28th Street (LOS F in the afternoon peak-hour period);
- Boston Avenue and I-5 Southbound On-ramp (LOS F in the afternoon peak-hour period);
- 32nd Street and Wabash Street (LOS F during both peak-hour periods); and
- Harbor Drive and 32nd Street (LOS F during both peak-hour periods).

The Barrio Logan Community Plan Update Alternative 2 is considered to have a cumulative traffic related impact at all fifteen intersections listed above.

Appendix D contains the LOS calculation worksheets.

			T ON YEAR (2030) AK-HOUR INTE							
				EXIS	FING	ALTI	ERNATI	VE 2		
	INTERSECTION	TRAFFIC CONTROL	PEAK HOUR	DELAY (a)	LOS (b)	DELAY (a)		LOS (b)	Δ (c)	SIGNIFICANT
1			AM	19.4	В	12.8		В	-6.6	NO
1	Commercial St & 16th St	Signal	PM	24.6	С	31.2		С	6.6	NO
2	National Ave & 16th St	Two-Way Stop	AM	11.7	В	53.1	(NB)	F	41.4	YES
2	National Ave & Totil St	1 wo-way stop	PM	12.5	В	225.9	(SB)	F	213.4	YES
3	National Ave & Sigsbee St	Signal	AM	9.6	А	8.2		А	-1.4	NO
5	National Ave & Sigsbee St	Signar	PM	9.6	А	7.3		А	-2.3	NO
4	Newton Ave & Sigsbee St	All-Way Stop	AM	7.9	А	8.8		А	0.9	NO
-		·	PM	7.6	А	8.0		А	0.4	NO
5	Main St & Sigsbee St	All-Way Stop	AM	7.4	А	8.1		А	0.7	NO
-			PM	7.4	А	7.8		А	0.4	NO
6	Harbor Dr & Sigsbee St	One-Way Stop	AM	17.0	С	ECL	(SB)	F		YES
			PM	18.1	С	ECL	(SB)	F		YES
7	Logan Ave & Beardsley St- I-5 SB ramp	All-Way Stop	AM	11.1	В	34.8		D	23.7	NO
		· · · · · · · · · · · · · · · · · · ·	PM	11.9	В	90.7	(EB)	F	78.8	YES
8	National Ave & Beardsley St	All-Way Stop	AM	8.5	А	42.4		E	33.9	YES
Ů		The truy biop	PM	8.7	А	131.5	(EB)	F	122.8	YES
9	Newton Ave & Beardsley St	All-Way Stop	AM	8.5	А	9.4		А	0.9	NO
<u></u>		The truy biop	PM	8.2	А	8.6		А	0.4	NO
10	Main St & Beardsley St	All-Way Stop	AM	8.5	А	15.5		С	7.0	NO
10	initial of the Delatable y St	The truy biop	PM	7.8	А	9.5		Α	1.7	NO
11	Harbor Dr & Beardsley St	One-Way Stop	AM	20.3	С	147.1	(SB)	F	126.8	YES
		one way stop	PM	18.3	С	50.6		F	32.3	YES
12	Kearney St & Cesar E. Chavez Pkwy	Signal	AM	21.7	С	51.6		D	29.9	NO
		~-8	PM	21.2	С	35.4		D	14.2	NO
13	Logan Ave & Cesar E. Chavez Pkwy	Signal	AM	14.0	В	31.8		С	17.8	NO
			PM	13.0	В	66.5		E	53.5	YES
14	National Ave & Cesar E. Chavez Pkwy	Signal	AM	11.0	В	34.6		С	23.6	NO
		~-8	PM	14.0	В	52.5		D	38.5	NO
15	Newton Ave & Cesar E. Chavez Pkwy	Signal	AM	8.1	А	9.4		А	1.3	NO
		~-8	PM	9.1	А	16.0		В	6.9	NO
16	Main St & Cesar E. Chavez Pkwy	Signal	AM	9.6	А	48.5		D	38.9	NO
	· · · · · · · · · · · · · · · · · · ·		PM	8.7	А	52.0		D	43.3	NO
17	Harbor Dr & Cesar E. Chavez Pkwy	Signal	AM	33.2	С	118.8		F	85.6	YES
			PM	43.6	D	103.2		F	59.6	YES
18	Logan Ave & I-5 SB On-ramp	One-Way Stop	AM	8.8	А	9.3		А	0.5	NO
-		- · · · · · · · · · · · · · · · · · · ·	PM	9.9	А	14.8		В	4.9	NO
19	National Ave & SR-75 Off-ramp	One-Way Stop	AM	10.1	В	13.1		В	3.0	NO
-	······································	- · · · · · · · · · · · · · · · · · · ·	PM	11.0	В	13.7		В	2.7	NO
20	National Ave & Evans St	Two-Way Stop	AM	11.2	В	14.4		В	3.2	NO
			PM	11.9	В	21.1		С	9.2	NO

Notes: **Bold** values indicate intersections operating at LOS E or F. (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement. (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0

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INTERSECTION TRAFFIC CONTROL PEX.HUEL INTERSECTION INTERSECTION INTERSECTION INTERSECTION 21 Newton Ave & Evms St Two-Way Stop AM 9.8 A 11.8 B 2.0 No. 21 Newton Ave & Evms St One-Way Stop AM 9.8 A 12.4 B 2.6 NO. 22 Main St & Evms St One-Way Stop AM 9.3 A 10.8 B 2.6 NO. 23 Logan Ave & Sampson St All-Way Stop AM 10.0 B 178.3 (NII) F 168.3 YES YES 24 National Ave & Sampson St Signal AM 10.7 B 240.2 (NII) F 168.3 NO 25 Newton Ave & Sampson St All-Way Stop AM 8.6 A 11.3 NO A 3.8 NO 3.4 NO 26 Main St & Sampson St Signal AM 8.6 A 11.8				1 ON YEAR (2030) HOUR INTERSI						
21 Newton Ave & Evans St Two-Way Stop AM 9.8 A 11.8 B 2.0 No 22 Main St & Evans St One-Way Stop AM 9.3 A 16.5 C 7.5 NO 23 Logan Ave & Sampson St All-Way Stop AM 9.3 A 16.5 C 7.5 NO 24 National Ave & Sampson St All-Way Stop AM 10.0 B 178.3 (NB) F 168.3 YES 24 National Ave & Sampson St Signal AM 10.3 B 8.1 A 4.2 No 25 Newton Ave & Sampson St All-Way Stop PM 7.6 A 8.9 A 1.3 NO 26 Main St & Sampson St All-Way Stop PM 7.6 A 8.9 A 1.3 NO 27 Hafor Dr & Sampson St All-Way Stop PM 8.6 A 11.8 B 2.2 NO <										•
121 Newton Ave & Evans St Two-Way Stop PM 9.8 A 12.4 B 2.6 No 12 Main St & Evans St One-Way Stop PM 9.3 A 16.3 C 7.5 No 12 Logan Ave & Sampson St All-Way Stop PM 9.6 A 16.3 C 7.2 No 12 kational Ave & Sampson St Signal PM 10.0 B 178.3 (NB) F 108.3 YES 24 kational Ave & Sampson St Signal PM 9.4 A 9.2 A 0.2 No 0.2 No 25 Newton Ave & Sampson St All-Way Stop PM 7.6 A 8.8 A 1.3 No 26 Main St & Sampson St All-Way Stop AM 6.2 A 1.4 B 5.2 NO 27 Harbor Dr & Sampson St Signal AM 8.7 A 10.8 Na No		INTERSECTION	TRAFFIC CONTROL	PEAK HOUR						SIGNIFICANT?
PM 9.8 A 12.4 B 2.6 NO 22 Main St, & Evans St One-Way Stop AM 9.3 A 16.8 C 7.5 NO 23 Logan Ave & Sampson St All-Way Stop AM 100 B 178.3 (NB) F 168.3 VIS 24 National Ave & Sampson St Signal AM 100.7 B 240.2 (NB) F 229.5 VIES 24 National Ave & Sampson St Signal AM 103 B 8.1 A 4.2.2 NO 25 Newton Ave & Sampson St All-Way Stop PM 7.6 A 8.8 A 1.3 NO 26 Main St, & Sampson St All-Way Stop AM 8.2 A 11.6 B 5.2 NO 27 Iarbor Dr, & Sampson St Signal AM 8.2 A 11.6 B 5.2 NO 28 National Ave & Schard St Tw	21	Newton Ave & Evans St	Two-Way Stop	AM						NO
12 Mars N & Evans St One-Way Stop PM 9.6 A 16.8 C 7.2 NO 23 Logan Ave & Sampson St All-Way Stop AM 10.0 B 178.3 (NB) F 168.3 VES 24 National Ave & Sampson St Signal AM 10.3 B 8.1 A -2.2 NO 25 Newton Ave & Sampson St All-Way Stop PM 9.4 A 9.2 A -0.2 NO 26 Main St & Sampson St All-Way Stop AM 7.5 A 8.8 A 1.3 NO 27 Harbor Dr & Sampson St All-Way Stop AM 2.2 A 1.16 B 3.4 NO 28 National Ave & Sicard St Two-Way Stop AM 2.10 C 41.7 D 14.6 NO 29 National Ave & 26th St All-Way Stop AM 8.7 A 9.6 A 0.9 NO				PM						NO
Image: constant of the second state of the	22	Main St & Evans St	One-Way Stop							
23 Login Ave & Sampon St All Way Stop PM 10.7 B 240.2 (NB) F 229.5 YES 24 National Ave & Sampon St Signal AM 10.3 B 8.1 A -2.2 NO 25 Newton Ave & Sampson St All Way Stop AM 7.5 A 8.8 A 1.3 NO 26 Main St & Sampson St All Way Stop AM 8.6 A 13.8 B 5.2 NO 26 Main St & Sampson St All Way Stop AM 8.6 A 13.8 B 5.2 NO 27 Harbor Dr & Sampon St Signal AM 27.1 C 41.7 D 14.6 NO 28 National Ave & Sicard St Two-Way Stop AM 17.0 B 14.1 B 2.0 NO 29 National Ave & 26th St All Way Stop AM 8.7 A 9.6 A 0.9 NO <td< td=""><td></td><td></td><td></td><td>PM</td><td></td><td></td><td></td><td>-</td><td></td><td></td></td<>				PM				-		
PM 10.7 B 24.0.2 (NB) F 229.5 VES 24 National Ave & Sampson St Signal PM 9.4 A 9.2 A -0.2 NO 25 Newton Ave & Sampson St All-Way Stop PM 7.5 A 8.9 A 1.3 NO 26 Main St, & Sampson St All-Way Stop PM 8.6 A 1.3.8 B 5.2 NO 27 Harbor Dr, & Sampson St Signal AM 23.1 C 25.3 C 2.2 NO 28 National Ave & Sicard St Two-Way Stop AM 23.1 C 25.3 C 2.2 NO 29 National Ave & Sicard St Two-Way Stop AM 11.4 B 14.1 B 2.3 NO 20 National Ave & 26th St All-Way Stop PM 8.8 A 10.8 B 2.0 NO 31 Main St & 26th St-Schley St All-Way Stop<	23	Logan Ave & Sampson St	All-Way Stop				. ,			
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Indication PM 8.2 A 11.6 B 3.4 NO 27 Harbor Dr. & Sampson St Signal AM 23.1 C 25.3 C 2.2 NO 28 National Ave & Sicard St Two-Way Stop AM 12.0 B 14.3 B 2.3 NO 29 National Ave & Sicard St MI-Way Stop AM 8.7 A 9.6 A 0.9 NO 30 National Ave & 15 SB Off-ramp One-Way Stop AM 11.5 B 12.1 B 0.6 NO 31 Main St & 20th St-Schley St All-Way Stop AM 17.8 CC 21.0 CC 3.2 NO 32 Harbor Dr & Schley St All-Way Stop AM 7.7 A 8.4 A 0.7 NO 33 National Ave & 28th St Signal AM 19.6 B 88.3 F 68.7 TES 34 Boston Ave & 28th St (c)	26	Main St & Sampson St	All-Way Stop							
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Image: line bar	27	Harbor Dr & Sampson St	Signal							
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32 Harbor Dr & Schley St Signal PM 14.1 B 30.3 C 16.2 No 33 National Ave & 28th St Signal AM 35.3 D 79.6 E 44.3 YES 34 Boston Ave & 28th St (c) Signal AM 10.6 B 27.8 C 16.2 NO 34 Boston Ave & 28th St (c) Signal AM 10.6 B 27.8 C 17.2 NO 35 Main St & 28th St (c) Signal AM 29.2 C 45.3 D 13.0 NO 36 Harbor Dr & 28th St (c) Signal AM 23.4 C 36.4 D 11.3 NO 36 Harbor Dr & 28th St (c) Signal AM 34.3 C 45.6 D 11.1 NO 37 Boston Ave & 1-5 SB On-ramp-29th St One-Way Stop AM 17.3 C 28.3 D 11.0 NO 38 Ma	51		Tim (ruj biop	PM						NO
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$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	34	Boston Ave & 28th St (c)	Signal	AM						NO
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	-	(0)		PM						YES
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	35	Main St & 28th St (c)	Signal	AM						NO
36 Harbor Dr & 28th St Signal PM 45.6 D 97.4 F 51.8 YES 37 Boston Ave & I-5 SB On-ramp-29th St One-Way Stop AM 17.3 C 28.3 D 11.0 NO 38 Main St & 32nd St One-Way Stop AM 21.9 C 21.8 C YES 38 Main St & 32nd St Signal AM 21.9 C 21.8 C -0.1 NO 39 32nd St & Wabash St Signal AM 38.5 D 130.6 F 92.1 YES 40 Harbor Dr & 32nd St Signal AM 31.7 C 144.3 F 112.6 YES 41 Main St & L15 Ramps Signal AM 10.8 B 10.3 B -0.5 NO		(6)		PM		-				
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39 32nd St & Wabash St Signal PM 32.0 C 85.1 F 53.1 YES 40 Harbor Dr & 32nd St Signal AM 31.7 C 144.3 F 112.6 YES 40 Harbor Dr & 32nd St Signal AM 31.7 C 144.3 F 112.6 YES 41 Main St & L15 Ramps Signal AM 10.8 B 10.3 B -0.5 NO			Ŭ							
40 Harbor Dr & 32nd St Signal AM 31.7 C 144.3 F 112.6 YES 41 Main St & L15 Ramps Signal AM 10.8 B 10.3 B -0.5 NO	39	32nd St & Wabash St	Signal							
40 Harbor Dr & 32nd St Signal PM 51.1 D 89.0 F 37.9 YES 41 Main St & L15 Ramps Signal AM 10.8 B 10.3 B -0.5 NO			o							
Main St & L15 Ramps Signal AM 10.8 B 10.3 B -0.5 NO	40	Harbor Dr & 32nd St	Signal							
41 Main St & L15 Ramps Signal										
E PM 11.5 B 11.6 B 01 NO	41	Main St & I-15 Ramps	Signal							
Notes:		L	č	PM	11.5	В	11.6	В	0.1	NO

Notes: **Bold** values indicate intersections operating at LOS E or F. (a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement. (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0 (c) The intersection may not operate as well as indicated due to potential queuing. See text of the report for additional explanation.

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Roadway Segment Analysis

Table 6-3 displays the roadway segment analysis under the Horizon Year (2030) conditions for the Alternative 2 scenario. As shown in the table, based on planning level analysis and on ADT volumes, the Alternative 2 scenario would be considered having a cumulative roadway segment impact along the following roadway segments:

- Cesar Chavez Parkway between Logan Avenue and National Avenue (LOS E);
- Cesar Chavez Parkway between National Avenue and Newton Avenue (LOS F);
- Cesar Chavez Parkway between Newton Avenue and Main Street (LOS E);
- Sampson Street between National Avenue and Harbor Drive (LOS F):
- 26th Street between National Avenue and Main Street (LOS F);
- 28th Street between I-5 and Boston Avenue (LOS F):
- 32nd Street between Main Street and Wabash Boulevard (LOS E);
- Vesta Street between Main Street and I-5 Ramps (LOS E);
- Logan Avenue between Sigsbee Street and Cesar Chavez Parkway (LOS F):
- National Avenue between 16th Street and Sigsbee Street (LOS E); .
- National Avenue between Sigsbee Street and Beardsley Street (LOS E);
- National Avenue between Beardsley Street and Cesar Chavez Parkway (LOS F);
- National Avenue between Cesar Chavez Parkway and Evans Street (LOS F);
- National Avenue between Sicard Street and 27th Street (LOS F);
- Boston Avenue between 28th Street and 29th Street (LOS F);
- Boston Avenue between 29th Street and 32nd Street (LOS F);
- Main Street between Cesar Chavez Parkway and Evans Street (LOS F);
- Main Street between Evans Street and 26th Street (LOS F);
- Main Street between 26th Street and 28th Street (LOS F); Main Street between 28th Street and 29th Street (LOS F);
- •
- Main Street between 29th Street and 32nd Street (LOS F);
- Main Street between 32nd Street and Rigel Street (LOS F);
- Main Street between Rigel Street and Una Street (LOS F); and
- Main Street between Una Street and I-5 SB Off-ramp (LOS F).

Freeway Segment Analysis

Table 6-4 displays the freeway segments analysis under the Horizon Year (2030) conditions for the Alternative 2 scenario. As shown in the table, the Alternative 2 scenario would have a cumulative traffic related impact along the following freeway segments:

- I-5 from J Street to SR-75 Junction (LOS F and LOS E for the morning and afternoon peak-hour periods, respectively);
- I-5 from SR-75 Junction to 28th Street (LOS F and LOS E for the morning and afternoon peak-. hour periods, respectively);
- I-5 from 28th Street to I-15 Interchange (LOS E during the morning peak-hour periods);
- I-5 from I-15 Interchange to Division Street (LOS F both peak-hour periods); and
- I-15 from I-5 Interchange to Ocean View Boulevard (LOS F during the afternoon peak-hour period)

metro matro metro	(9) NOLLY JEESSY LJ AVMUVOG										
International Internat	NUMBER OF ADDITION (4)	HIGHEST ACCEPTABLE LOS D VOLUME	LOS E CAPACITY	EXIST ADT	TNG CONDIT V/C RATIO (b)	IONS	YEAR 2 ADT	330 (ALTERNA V/C RATIO (b)	(TIVE 2) LOS		SIGNIFICAN
Classification Discription State State </th <th></th> <th>-</th> <th></th> <th></th> <th>-</th> <th></th> <th></th> <th></th> <th></th> <th>-</th> <th></th>		-			-					-	
Internationality of the interna	3 Lane Collector (with TWLT)	18,750	22,500	14,170	0.630	C	15,800	0.702	D	0.072	NO
contactorization transformed and trans	4 Lane Collector (with TWLT)	25,000	30,000	15,300	0.510	υ (26,200	0.873	E	0.363	YES
Matrix and structures Jame	3 Lane Collector (with TWI T)	16,750	005 00	11 812	2020	ן נ	20,100	0.01.1	I I		VEC
One of the control of the co	4 I ane Collector (with TWI T)	02/001 25 000	30.000	10,381	0.346	ء ر	12 700	0.202	а и	0.077	CT ON
1 bar		000,67	000,02	100,01		4	001/21	1	4	110-0	
Observation Interfactory Interfactory </td <td>2 Lane Collector (No TWLT)</td> <td>6,500</td> <td>8,000</td> <td>3,086</td> <td>0.386</td> <td>в</td> <td>5,700</td> <td>0.713</td> <td>D</td> <td>0.327</td> <td>ON</td>	2 Lane Collector (No TWLT)	6,500	8,000	3,086	0.386	в	5,700	0.713	D	0.327	ON
Manual standing June Colume (NeT VET) Gain June	2 Lane Collector (No TWLT)	6,500	8,000	2,561	0.320	в	8,700	1.088	F	0.768	YES
Media meratalina Jaac charm (NTG) Color No A <											
Old statistication Jane Observation Jane Observatio	2 Lane Collector (No TWLT)	6,500	8,000	2,380	0.298	A	8,300	1.038	F	0.740	YES
Other and Mandel And		-			-					-	
Internationality Intercentant Mathy Same Col Same Sam	3 Lane Collector (with TWLT)	18,750	22,500	22,000	0.978	E	36,600	1.627	F	0.649	YES
Atmack and the form 1 are oblic obtained 3 and 4 and 3 and 5 and	4 Lane Collector (with TWLT)	25,000	30,000	18,856	0.629	С	24,300	0.810	D	0.181	ON
Biology and stal Junits June Challower's (MJ) Guid Light Light <thlight< th=""></thlight<>	4 Lane Major Arterial	35,000	40,000	16,658	0.416	В	23,700	0.593	С	0.177	NO
Ibord and thanks Ibord and thanks <thibord and="" th="" thanks<=""> <thibord and="" t<="" td="" thanks<=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>_</td><td></td></thibord></thibord>										_	
(Mark and Yahadi Ihai) (Jaac Caleen volt YYL) (Jao) (Jao) (Jac)	2 Lane Collector (No TWLT)	6,500	8,000	1,500	0.188	А	5,800	0.725	D	0.538	ON
outon statistical statisticon statis statistical statistical statistical statistical statis	0.1 and Collector (with TWI T)	13 000	15 000	12 170	0.070	P	14 100	0.040	F	0.067	VEC
Mind Stand 15 Jane Calleeo NG VPUT) G.200 L023 G.31 A L040 D15 A G.010 Mind Stand 15 Jane Calleeo NG VPUT) G.200 L023 C <thc< th=""> <thc< th=""> C <</thc<></thc<>	4 I ane Maior Arterial	35,000	40.000	19 785	0.495	a m	26,700	0.668	a ر	0.173	CT ON
Number set 15 Jane Calebray Cer TWTJ Galo Stord Jord I. Jane Jane Aller Stard JS 2. Jane Calebray Cer TWTJ 6.00 5.00 1.00 C 6.00 0.01 D 0.01 D 0.01 Aller Stard Stard JS 2. Jane Calebray Cer TWTJ 1.300 15.00 15.00 1.00 C 0.00 1.00 0.01 D D 0.01 D <tdd< td=""> D <tdd< td=""> <tdd< td=""><td>min n / mint ann +</td><td>000,00</td><td>10,000</td><td>10167</td><td>0010</td><td>h</td><td>20,100</td><td>00000</td><td>></td><td>6/110</td><td></td></tdd<></tdd<></tdd<>	min n / mint ann +	000,00	10,000	10167	0010	h	20,100	00000	>	6/110	
Alian and 15 21are Calcore (%) (W1) 4.00 5.00 4.00 6.03 C 6.00 6.23 F 0.123 act 1 P8 and Sighes Si 2 1are Calcore (%) (W1) 1.000 15.00 2.04 0.24 0.29 0.23 10 0.73 <	2 Lane Collector (No TWLT)	6,500	8,000	1,723	0.215	A	1,400	0.175	A	-0.040	ON
Main Stand 15 Ztane Chieve (w) WU,1 560 600 601 C 600 053 E 021 a A C		-		-		-					
a lange differencies in the second method me	2 Lane Collector (No TWLT)	6,500	8,000	4,900	0.613	С	6,600	0.825	Е	0.212	YES
Index of solution by the interval of a constrained by the interval of a cons										_	
Signal stand	2 Lane Collector (with TWLT)	13,000	15,000	3,659	0.244	А	10,800	0.720	D	0.476	ON
Construction of all of the structure of why in the stru	2 Lane Collector (with TWLT)	13,000	15,000	7,478	0.499	C	17,000	1.133	F	0.634	YES
Ant Ant <td>2 Lane Collector (with TWLT)</td> <td>13,000</td> <td>15,000</td> <td>2,954</td> <td>0.197</td> <td>A</td> <td>6,000</td> <td>0.400</td> <td>В</td> <td>0.203</td> <td>NO</td>	2 Lane Collector (with TWLT)	13,000	15,000	2,954	0.197	A	6,000	0.400	В	0.203	NO
In the standing betwee									1		
Newfores hard Steards J. Jame Collector (NVLT) (500 (500 (510)	2 Lane Collector (with TWLT)	13,000	15,000	2,603	0.174	A ·	13,200	0.880	E	0.706	YES
memory static	2 Lane Collector (with 1 WL1)	13,000	000,61	4,500	0.300	۲ L	17 100	0.880	ы н	002 1	YES
results results <t< td=""><td>2 Lane Collector (No 1 WL1)</td><td>002'S</td><td>0,000</td><td>110,0</td><td>404.0 0 500</td><td>J</td><td>0.01/1</td><td>051.1</td><td>14 L</td><td>0 570</td><td>VEC</td></t<>	2 Lane Collector (No 1 WL1)	002'S	0,000	110,0	404.0 0 500	J	0.01/1	051.1	14 L	0 570	VEC
International and 2016 state International and 2016 state <th< td=""><td>2 Lane Collector (with TWI T)</td><td>13 000</td><td>0,000 15 000</td><td>3 677</td><td>246.0</td><td>⊳ ر</td><td>8 000</td><td>0.005 0</td><td>r C</td><td>0.2.0</td><td>ND N</td></th<>	2 Lane Collector (with TWI T)	13 000	0,000 15 000	3 677	246.0	⊳ ر	8 000	0.005 0	r C	0.2.0	ND N
International stands Jame Concorr(b) THL) Scion	2 Lane Collector (No TWI T)	6 500	e nnn	2 110,0	1.056	4 1	0,200	2761	ы Б	0.010	NEC NO
All 21 and 20n St	2 Lane Collector (No 1 WL1)	000,0	8,000	8,445	900.1	×	10,200	C/7.1	F	0.219	YES
29th St and 32nd St 21ane Collector (No TWLT) 6.500 8.000 3.46 0.35 0.37 1.113 F 0.810 Benchley St and Cearc (Ivery Flyvy 21ane Collector (No TWLT) 6.500 8.000 3.566 0.446 C 5.700 0.713 F 0.800 Coster Chavez Play and Evans St 21ane Collector (No TWLT) 6.500 8.000 2.938 0.325 B 1.500 1.125 F 0.800 Coster Chavez Play and Evans St 21ane Collector (No TWLT) 6.500 8.000 2.938 0.325 B 1.500 1.125 F 1.000 1.650 1.001 F 1.000 1.650 1.001 F 1.000 1.650 1.001 F 1.001 F 0.115 F 0.115 <td>2 Lane Collector (No TWLT)</td> <td>6,500</td> <td>8,000</td> <td>2,420</td> <td>0.303</td> <td>Α</td> <td>16,400</td> <td>2.050</td> <td>F</td> <td>1.747</td> <td>YES</td>	2 Lane Collector (No TWLT)	6,500	8,000	2,420	0.303	Α	16,400	2.050	F	1.747	YES
Beardsby Stand Cesar Chavez Pkwy and Even Kwy 2 Lane Collector (No TWLT) 6.500 8.000 3.566 0.446 C 5.700 0.713 P 0.800 Cesar Chavez Pkwy and Even St 2 Lane Collector (No TWLT) 6.500 8.000 2.598 0.325 B 9.400 1.175 F 0.800 2 Man St 2 Lane Collector (No TWLT) 6.500 8.000 2.598 0.325 B 1.900 1.175 F 0.800 2 Man St 3 Lane Collector (No TWLT) 13.000 11.260 7.435 0.661 F 1.900 1.916 F 1.910 F 0.116	2 Lane Collector (No TWLT)	6,500	8,000	2,420	0.303	A	8,900	1.113	F	0.810	YES
0TWLT)6.5008.0003.5660.446C5,7000.713D0000TWLT)6.5008.0002.5980.325B9,4001.175F008000TWLT)6.5008.0002.5980.325B19,54001.925F0.5600TWLT)9.75011,2507,4350.661C13,6001.926F0.54807WLT)9.75011,2507,4350.661C13,60017.00F0.549013,00015,00011,26011,2601.12660.751F13,00016,010F013,00015,00011,26011,2601.12661.001F0.300F0.313013,00015,00011,2601.102F17,8001.716F0.313013,00015,00015,1711.002F17,8001.726F0.315013,00015,00015,1711.012F17,8001.787F0.315013,00015,00015,1711.012F17,8001.787F0.306013,00015,00015,1771.012F17,8001.787F0.315013,00015,00015,1771.012F17,8001.787F0.306035,00015,00015,1771.012F2,800											
0 TWLT)6,5008,0002,5980.325B9,4001.175F0,8500 TWLT)6,5008,0002,5980.325B15,4001.925F1,6000 TWLT)9,75011,2507,4350.661C13,6001.925F0,5480 TWLT)13,00015,00011,2660.751F13,00015,00011,2661,001F0,9000,867F0,1160 TWLT)9,75011,25011,2661,010F19,3001,716F0,11610 TWLT)13,00015,00011,2661,010F25,8001,716F0,1160 TWLT)13,00015,00015,9141,063F26,9001,716F0,1160 TWLT)13,00015,00015,9141,012F17,8001,870F0,1360 TWLT)13,00015,00015,9141,012F17,8001,870F0,1360 TWLT)13,00015,00015,9141,012F17,8001,870F0,1360 TWLT)13,00015,01015,9141,012F17,8001,870F0,1360 TWLT)13,00015,00015,9141,012F17,8001,870F0,1360 TWLT)35,00015,01015,9141,012F17,8001,870F0,1360 THUT35,00010,00015,914	2 Lane Collector (No TWLT)	6,500	8,000	3,566	0.446	С	5,700	0.713	D	0.267	ON
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0.TWLT) $9,750$ $11,250$ $7,435$ 0.661 C $13,000$ $11,206$ $7,435$ 0.611 F 0.3067 F 0.548 $0.TWLT$) $13,000$ $15,000$ $11,266$ 0.751 F $19,300$ 0.867 F 0.715 $0.TWLT$) $13,000$ $15,000$ $11,266$ 1.001 F $29,300$ 1.716 F 0.313 $0.TWLT$) $13,000$ $15,000$ $15,944$ 1.063 F $25,800$ 1.720 F 0.313 $0.TWLT$) $13,000$ $15,000$ $15,041$ 1.063 F $25,800$ 1.720 F 0.313 $0.TWLT$) $13,000$ $15,000$ $15,010$ $15,177$ 1.012 F $20,300$ 1.877 F 0.175 $0.TWLT$) $13,000$ $15,000$ $15,177$ 1.012 F $17,800$ 1.877 F 0.175 $0.TWLT$) $13,000$ $15,000$ $15,177$ 1.012 F $17,800$ 1.877 F 0.175 $0.TWLT$) $13,000$ $15,000$ $15,177$ 1.012 F $17,800$ 1.877 F 0.176 $0.TWLT$ $35,000$ $40,000$ $13,778$ 0.344 A $26,000$ 0.650 C 0.396 $0.TTMLT$ $35,000$ $40,000$ $8,816$ 0.227 A $24,800$ 0.650 C 0.396 $0.TTMLT$ $35,000$ $40,000$ $18,900$ 0.473 B $28,100$ $0.$	2 Lane Collector (No TWLT)	6,500	8,000	2,598	0.325	в	15,400	1.925	F	1.600	YES
Image: constraint of the	3 Lane Collector (No TWLT)	9,750	11,250	7,435	0.661	ວ 🖻	13,600	0.867	нц	0.548	YES
intrv intrv </td <td>3 Lane Collector (No TWLT)</td> <td>9.750</td> <td>11.250</td> <td>11.266</td> <td>1.001</td> <td>4 F</td> <td>19.300</td> <td>1.716</td> <td>F</td> <td>0.715</td> <td>VES</td>	3 Lane Collector (No TWLT)	9.750	11.250	11.266	1.001	4 F	19.300	1.716	F	0.715	VES
ih TWLT)13,00015,00015,9441.063F20,3001.353F0.29029ih TWLT)13,00015,00015,1771.012F1.353F0.3957aterial35,00040,00012,0940.302A30,4000.760D0.458aterial35,00040,00013,7780.344A26,0000.650C0.395aterial35,00040,00013,7780.324A24,8000.650C0.395aterial35,00040,0008,8160.227A24,8000.650C0.395aterial35,00040,0008,8160.220A20,2000.650B0.395aterial35,00040,00018,9000.413B23,1000.703C0.395aterial35,00040,00016,3200.413B23,1000.703C0.395aterial35,00040,00016,3200.408B32,2000.703C0.397	4 Lane Collector (No TWLT)	13,000	15,000	21,100	1.407	Ŀ	25,800	1.720	F	0.313	YES
ith TWLT) 13,000 15,000 15,177 1.012 F 17,800 1.187 F 0.175 rterial 35,000 40,000 13,778 0.302 A 30,400 0.760 D 0.458 rterial 35,000 40,000 13,778 0.344 A 26,000 0.650 C 0.305 rterial 35,000 40,000 9,080 0.227 A 24,800 0.650 C 0.305 rterial 35,000 40,000 8,816 0.227 A 20,200 0.650 C 0.305 rterial 35,000 40,000 8,816 0.220 A 20,200 0.655 B 0.285 rterial 35,000 40,000 18,900 0.403 B 28,100 0.505 B 0.230 rterial 35,000 40,000 16,320 0.408 B 32,200 0.605 D 0.230 rterial 35,000 16,320 0.408 B 32,200 0.605 D 0.230 <td>2 Lane Collector (with TWLT)</td> <td>13,000</td> <td>15,000</td> <td>15,944</td> <td>1.063</td> <td>Ŀ</td> <td>20,300</td> <td>1.353</td> <td>F</td> <td>0.290</td> <td>YES</td>	2 Lane Collector (with TWLT)	13,000	15,000	15,944	1.063	Ŀ	20,300	1.353	F	0.290	YES
Iterial 35,000 40,000 12,094 0.302 A 30,400 0.760 D 0.458 Iterial 35,000 40,000 13,778 0.344 A 26,000 0.650 C 0.305 Iterial 35,000 40,000 9,080 0.227 A 24,800 0.650 C 0.393 Iterial 35,000 40,000 8,816 0.220 A 20,200 0.650 B 0.393 Iterial 35,000 40,000 8,816 0.220 A 20,200 0.6505 B 0.385 Iterial 35,000 40,000 18,900 0.473 B 28,100 0.703 C 0.230 Iterial 35,000 40,000 16,320 0.408 B 32,200 0.703 C 0.230	2 Lane Collector (with TWLT)	13,000	15,000	15,177	1.012	Ŀ	17,800	1.187	F	0.175	YES
Iterial $35,000$ $40,000$ $12,094$ 0.302 A $30,400$ 0.760 D 0.458 Iterial $35,000$ $40,000$ $13,778$ 0.344 A $26,000$ 0.650 C 0.306 Iterial $35,000$ $40,000$ $9,080$ 0.227 A $24,800$ 0.620 C 0.303 Iterial $35,000$ $40,000$ $8,816$ 0.220 A $20,200$ 0.505 B 0.285 Iterial $35,000$ $40,000$ $18,900$ 0.473 B $28,100$ 0.703 C 0.230 Iterial $35,000$ $40,000$ $16,320$ 0.408 B $23,200$ 0.703 C 0.230 Iterial $35,000$ $40,000$ $16,320$ 0.408 B $32,200$ 0.805 D 0.397										_	
Interial $35,000$ $40,000$ $1.5,7/8$ 0544 A $26,000$ 0.050 C 0506 Interial $35,000$ $40,000$ 9.080 0.227 A $24,800$ 0.620 C 0393 Interial $35,000$ $40,000$ $8,816$ 0.220 A $20,200$ 0.505 B 0.285 Interial $35,000$ $40,000$ $8,816$ 0.220 A $20,200$ 0.505 B 0.285 Interial $35,000$ $40,000$ $18,900$ 0.473 B $28,100$ 0.703 C 0.230 Interial $35,000$ $40,000$ $16,320$ 0.408 B $32,200$ 0.703 C 0.230	4 Lane Major Arterial	35,000	40,000	12,094	0.302	A ·	30,400	0.760	D	0.458	ON 0
rterial 35,000 40,000 8,816 0.220 A 20,200 0.505 B 0.285 rterial 35,000 40,000 18,900 0.473 B 28,100 0.703 C 0.230 rterial 35,000 40,000 18,900 0.473 B 28,100 0.703 C 0.230 rterial 35,000 40,000 16,320 0.408 B 32,200 0.805 D 0.397	4 Lane Major Arterial 4 Lane Major Arterial	35,000	40,000	9,080 9,080	0.227	A A	24,800	0.620	ט ר	0.393	ON N
rterial 35,000 40,000 18,900 0.473 B 28,100 0.703 C 0.230 rterial 35,000 40,000 16,320 0.408 B 32,200 0.805 D 0.397	4 Lane Major Arterial	35,000	40,000	8,816	0.220	A	20,200	0.505	В	0.285	ON
rterial 35,000 40,000 16,320 0.408 B 32,200 0.805 D 0.397	4 Lane Major Arterial	35,000	40,000	18,900	0.473	в	28,100	0.703	С	0.230	ON
Notes: Bold values indicate roadway segments operating at LOS E or F.	4 Lane Major Arterial	35,000	40,000	16,320	0.408	В	32,200	0.805	D	0.397	ON
 (a) Roadway Functional Classifications are based on field obs (b) The v/c Ratio is calculated by dividing the ADT volume by 		 2 Lane Collector (No TWLT) 2 Lane Collector (with TWLT) 3 Lane Collector (with TWLT) 4 Lane Major Arterial 2 Lane Collector (with TWLT) 4 Lane Major Arterial 2 Lane Collector (No TWLT) 3 Lane Collector (No TWLT) 2 Lane Collector (No TWLT) 2 Lane Collector (No TWLT) 2 Lane Collector (No TWLT) 3 Lane Collector (No TWLT) 2 Lane Collector (No TWLT) 3 Lane Collector (No TWLT) 3 Lane Collector (No TWLT) 4 Lane Major Arterial 	the TWLT) to TWLT) the TWLT)	OD TWLT) 0.000 in TWLT) 6,500 in TWLT) 8,750 in TWLT) 18,750 in TWLT) 18,750 rein TWLT) 18,750 in TWLT) 18,750 rein TWLT) 5,000 rein TWLT) 5,000 in TWLT) 5,000 in TWLT) 5,000 in TWLT) 5,000 in TWLT) 13,000 in TWLT) 13,000 in TWLT) 13,000 in TWLT) 5,500 in TWLT) 13,000 in TWLT) 13,000 in TWLT) 5,500 in TWLT) 5,500 </td <td>otrwitt) 0.500 8.000 ihi TWLT) 18.750 8.000 ihi TWLT) 18.750 22.500 ihi TWLT) 25.000 30.000 ihi TWLT) 25.000 30.000 reial 35.000 40.000 ihi TWLT) 13.000 15.000 reial 35.000 15.000 ini TWLT) 13.000 15.000 ini TWLT) 0.7WLT 5.000</td> <td>of TWL1) 6,500 8,000 2,380 ih TWLT) 18,750 20,000 2,380 ih TWLT) 18,750 20,000 18,856 in TWLT) 25,000 30,000 18,856 in TWLT) 25,000 30,000 18,856 in TWLT) 25,000 30,000 18,856 in TWLT) 25,000 8,000 13,172 in TWLT) 5,500 8,000 13,172 in TWLT) 13,000 15,000 13,172 in TWLT) 13,000 15,000 3,617 in TWLT) 13,000 15,000 3,659 in TWLT) 13,000 15,000 3,617 in TWLT) 13,000 15,000 3,617 in TWLT) 13,000 15,000 2,436 in TWLT) 13,000 13,000 2,436 in TWLT) 13,000 13,000 2,436 in TWLT) 13,000 13,000 2,436 in TWLT) 6,500</td> <td>OTVLIJ 0.000 0.000 0.000 0.000 0TWLIJ 6.500 8.000 2.380 0.028 0TWLIJ 87.00 2.000 0.978 0.029 0TWLIJ 87.00 2.000 18.456 0.629 nt TWLIJ 25.000 30.000 18.456 0.629 nt TWLIJ 55.00 8.000 15.00 0.188 nt TWLIJ 13.000 15.000 17.32 0.478 nt WLIJ 13.000 15.000 17.32 0.474 nt WLIJ 13.000 15.000 3.473 0.446 NtWLIJ 13.000 15.000 3.473 0.446 NtWLIJ 13.000 15.000 3.473 0.446<</td> <td>International International Internat International International</td> <td>International International Internat</td> <td>ortuctry c.500 c.000 c.500 c.500</td> <td>International and transmersional and transmersind and transmersional and transmersional and transmersion</td>	otrwitt) 0.500 8.000 ihi TWLT) 18.750 8.000 ihi TWLT) 18.750 22.500 ihi TWLT) 25.000 30.000 ihi TWLT) 25.000 30.000 reial 35.000 40.000 ihi TWLT) 13.000 15.000 reial 35.000 15.000 ini TWLT) 13.000 15.000 ini TWLT) 0.7WLT 5.000	of TWL1) 6,500 8,000 2,380 ih TWLT) 18,750 20,000 2,380 ih TWLT) 18,750 20,000 18,856 in TWLT) 25,000 30,000 18,856 in TWLT) 25,000 30,000 18,856 in TWLT) 25,000 30,000 18,856 in TWLT) 25,000 8,000 13,172 in TWLT) 5,500 8,000 13,172 in TWLT) 13,000 15,000 13,172 in TWLT) 13,000 15,000 3,617 in TWLT) 13,000 15,000 3,659 in TWLT) 13,000 15,000 3,617 in TWLT) 13,000 15,000 3,617 in TWLT) 13,000 15,000 2,436 in TWLT) 13,000 13,000 2,436 in TWLT) 13,000 13,000 2,436 in TWLT) 13,000 13,000 2,436 in TWLT) 6,500	OTVLIJ 0.000 0.000 0.000 0.000 0TWLIJ 6.500 8.000 2.380 0.028 0TWLIJ 87.00 2.000 0.978 0.029 0TWLIJ 87.00 2.000 18.456 0.629 nt TWLIJ 25.000 30.000 18.456 0.629 nt TWLIJ 55.00 8.000 15.00 0.188 nt TWLIJ 13.000 15.000 17.32 0.478 nt WLIJ 13.000 15.000 17.32 0.474 nt WLIJ 13.000 15.000 3.473 0.446 NtWLIJ 13.000 15.000 3.473 0.446 NtWLIJ 13.000 15.000 3.473 0.446<	International Internat International International	International Internat	ortuctry c.500 c.000 c.500 c.500	International and transmersional and transmersind and transmersional and transmersional and transmersion

(b) The v/c Ratio is calculated by dividing the ADT volume by each respectiv K.(SND_TPTO(095707000)[Excell[707000RS01.xlsm]2030 Alt2

					HORIZON Y FRI	TABLE 6-4 VY YEAR (2030) CONDITIONS ALTERN FREEWAY SEGMENT LOS SUMMARY	TABLE 6-4) CONDITION GMENT LOS.	TABLE 6-4 HORIZON YEAR (2030) CONDITIONS ALTERNATIVE 2 FREEWAY SEGMENT LOS SUMMARY	Æ 2						
					EXISTING	ING					ALTERNATIVE 2	ATIVE 2			
FREEWAY SEGMENT	DIRECTION	NUMBER OF LANES	CAPACITY (a)	ADT (b)	PEAK-HOUR VOLUME (c)	V/C RATIO	SOT	NUMBER OF LANES	CAPACITY (a)	ADT (b)	PEAK- HOUR VOLUME (c)	V/C RATIO	SOT	V/C RATIO Δ	SIGNIFICANT?
I.S.					AM	AM PEAK									
	NB	4 M	9,400	1 < 1 000	7,793	0.829	D	4 M + 1 H	11,000	242 400	11,565	1.051	F0	0.22	YES
uonount c/-xc of teens t	SB	4 M	9,400	104,000				4 M + 1 H	11,000	243,400					:
SR-75 Junction to 28th Street	NB	4 M	9,400	160,000	7,603	0.809	D	4 M + 1 H	11,000	241,000	11,451	1.041	F0	0.23	YES
	SB	4 M	9,400					4 M + 1 H	11,000						:
28th Street to I-15 Interchange	NB	4 M 4 M	9,400 9,400	154,000	7,317	0.778	υ	4 M + 1 H 4 M + 1 H	11,000	222,400	10,568	0.961	Э	0.18	YES
	NB	4 M	9,400	100 000	8,933	0.950	Е	4 M + 1 H	11,000	267 100	12,454	1.132	F0	0.18	YES
1-12 Interchange to Division St	SB	4 M	9,400	100,000				4 M + 1 H	11,000	707,100					1
I-15															:
	NB	3 M	7,050	000				3 M	7,050	100 000					1
I-5 Interchange to Ocean View Blvd	SB	3 M	7,050	000,66	4,722	0.670	c	3 M	7,050	129,900	6,457	0.916	D	0.25	:
SR-75 (d)															:
I S Interchance to Gloriette Blud	WB	2 M	4,700	007-10				2 M	4,700	03 500					
1-) Interchange to Objicita Dive	EB	3 M	7,050	24,700	4,629	0.657	С	3 M	7,050	000000	5,929	0.841	D	0.18	:
						4	PM PEAK								
I-5															
I Street to SR-75 Innetion	NB	4 M	9,400	164 000				4 M + 1 H	11,000	243 400					:
	SB	4 M	9,400	oppfi or	7,036	0.749	С	4 M + 1 H	11,000		10,443	0.949	Э	0.20	YES
SR-75 Junction to 28th Street	NB	4 M	9,400	160,000				4 M + 1 H	11,000	241,000					1
	SB	4 M	9,400		6,865	0./30	υ	4 M + I H	11,000		10,340	0.940	Э	0.21	YES
28th Street to I-15 Interchange	SB	4 M 4 M	9,400 9,400	154,000	6.607	0.703	U	4 M + 1 H 4 M + 1 H	11,000	222,400	9.542	0.867	2	0.16	
1 16 Latendrameters to Division Ct	NB	4 M	9,400	100 000				4 M + 1 H	11,000	767 100					I
1-1-1 Interchange to Division St	SB	4 M	9,400	100,000	8,066	0.858	D	4 M + 1 H	11,000	707,100	11,245	1.022	$\mathbf{F0}$	0.16	YES
I-15															-
1-5 Interchange to Ocean View Blvd	NB	3 M	7,050	95 000	5,216	0.740	С	3 M	7,050	129 900	7,132	1.012	$\mathbf{F0}$	0.27	YES
	SB	3 M	7,050					3 M	7,050						1
SR-75 (d)															ı
1-5 Interchange to Glorietta Blvd	WB	3 M	7,050	73.000	4,585	0.650	С	3 M	7,050	93.500	5,873	0.833	D	0.18	1
	EB	2 M	4,700	oppie i				2 M	4,700	000-600					
Notes: Bold values indicate freeway segments operating at LOS E or F.	S E or F.														
M=Main Lane; A= Auxiliary Lane; H= HOV Lane. This analysis evaluates the higher peak-hour direction of traffic	ftraffic														
(a) The capacity is calculated as 2,350 ADT per main lane and 1,200 ADT per auxiliary lane	ne and 1,200 ADT per	r auxiliary lane													
(b) ITALIE VOLUMES PROVIDED BY CAUCADE (c) Peak-hour volume calculated by: (ADT*K*D)/Truck Factor	. Factor														
(d) SR-75 has reversable lanes.															

Mitigation

The following intersection improvements are needed to mitigate the peak-hour intersection impacts of the proposed Barrio Logan Community Plan Update Land Use Alternative 2:

- <u>National Avenue and 16th Street</u>: A new traffic signal is recommended to be installed at this intersection. A signal warrant worksheet for this intersection is included in **Appendix I**. This intersection would meet the peak-hour warrant evaluation based on the Horizon Year 2030 volumes.
- <u>Harbor Drive and Sigsbee Street</u>: A traffic signal is recommended to be installed at the intersection of Sigsbee Street and Harbor Drive. The signal is needed to serve the increased traffic from land uses proposed, as well as accommodating the traffic that would be diverted from Beardsley Street due to the median closure along Harbor Drive. A signal warrant worksheet for this intersection is included in Appendix I. This intersection would meet the peak-hour warrant evaluation based on the Horizon Year 2030 volumes.
- Logan Avenue and Beardsley Street/I-5 SB off-ramp: A traffic signal is recommended to be installed at the intersection. A signal warrant worksheet for this intersection is included in Appendix I. This intersection would meet the peak-hour warrant evaluation based on the Horizon Year 2030 volumes.
- <u>National Avenue and Beardsley Street:</u> A traffic signal is recommended to be installed at the intersection. A signal warrant worksheet for this intersection is included in Appendix I. This intersection would meet the peak-hour warrant evaluation based on the Horizon Year 2030 volumes.
- <u>Harbor Drive and Beardsley Street:</u> This improvement would extend the raised median along Harbor Drive in front of Beardsley Street converting the intersection to right-in/right-out only movements.
- Logan Avenue and Cesar Chavez Parkway: The addition of an exclusive eastbound right-turn lane and a northbound right-turn overlap phase are recommended to be installed at this intersection. The addition of the exclusive eastbound right-turn lane could be implemented by restriping changes only. An existing MTS bus stop is located where the exclusive right-turn lane is recommended. To reduce the impact to on-street parking, the relocation of the existing MTS bus stop is not recommended at this point. Further coordination with MTS is required before the implementation of this improvement. This improvement will not affect the existing on-street parking. The entrance to the State Route 75 ramps would be reconfigured to improve pedestrian circulation. This improvement could include the removal of the free northbound right-turn access from Cesar Chavez Parkway to the State Route 75 ramps.
- <u>National Avenue and Cesar Chavez Parkway:</u> Exclusive eastbound and westbound right-turn lanes are recommended to be installed at this intersection in order to reduce queuing along National Avenue. These improvements could be implemented by restriping changes only. These improvements will not affect the existing on-street parking. An existing MTS bus stop is located where the exclusive westbound right-turn lane is recommended. To reduce the impact to on-street parking, the relocation of the existing MTS bus stop is not recommended at this point. Further coordination with MTS is required before the implementation of this improvement.
- Main Street and Cesar Chavez Parkway: An exclusive westbound right-turn lane is recommended to be installed at this intersection in order to reduce queuing along Main Street. This improvement could be implemented by restriping changes only. This improvement will not affect the existing on-street parking. An existing MTS bus stop is located where the exclusive westbound right-turn lane is recommended. To reduce the impact to on-street parking, the relocation of the existing MTS bus stop is not recommended at this point. Further coordination with MTS is required before the implementation of this improvement.

- <u>Harbor Drive and Cesar Chavez Parkway:</u> A southbound right-turn overlap phase, dual eastbound left-turn lanes, an exclusive northbound right-turn lane and an exclusive westbound right-turn lane are recommended. It is anticipated that the exclusive northbound right-turn lane will be completed by Caltrans in conjunction with the extension of the westbound left-turn lane.
- Logan Avenue and Sampson Street: A traffic signal is recommended to be installed. Also, southbound and northbound left-turn lanes are recommended. These lanes could be added with restriping changes only at the time of signalization, and would not require roadway widening. The configuration changes would require the removal of on-street parking along Sampson Street. A total of 16 parking spaces are anticipated to be removed as part of this improvement. The removed parking spaces are likely serving commercial uses along Logan Avenue and multifamily residential units along Sampson Street. The removal of on-street parking spaces will create a shortage of on-street parking within the vicinity of this intersection. A signal warrant worksheet for this intersection is included in Appendix I. This intersection would meet the peak-hour warrant evaluation based on the Horizon Year 2030 volumes.
- <u>Main Street and 26th Street:</u> A partial street closure is recommended at the intersection for truck traffic restrictions. The northbound through and eastbound left movements would be eliminated. This improvement is not required to mitigate intersection level of services, but it is recommended for a reduction of truck traffic along residential streets within the community.
- <u>Harbor Drive and Schley Street:</u> The southbound through and southbound left-turn movements are recommended to be prohibited. Right-turn overlap signal phasing is recommended for the southbound movement.
- <u>National Avenue and 28th Street:</u> An exclusive southbound right-turn lane is recommended to be added. This improvement could be accomplished by restriping the roadway without the need for widening. A removal of one on-street parking space would be required along the west side of National Avenue to accommodate a 100-foot southbound exclusive right-turn lane.
- <u>Boston Avenue and 28th Street:</u> An exclusive eastbound right-turn lane is recommended to be added. This improvement could be implemented by restriping changes only and will not affect on-street parking.
- <u>Harbor Drive and 28th Street:</u> A second southbound left-turn lane and a second eastbound left-turn lane are recommended to be added.
- Boston Avenue and Interstate 5 Southbound Ramp-29th Street: This recommendation includes a truck right-turn prohibition for the northbound movement at the intersection of 28th Street and Boston Avenue and truck turning signage to encourage vehicles to use Main Street and 29th Street to enter the Interstate 5 southbound freeway. The Interstate 5 Southbound Ramp and Boston Avenue intersection is recommended to be signalized. A signal warrant worksheet for this intersection is included in Appendix I. This intersection would meet the peak-hour warrant evaluation based on the Horizon Year 2030 volumes.
- <u>32nd Street and Wabash Boulevard:</u> Potential improvements at this intersection will be further defined once Caltrans completes its truck access improvement study.
- <u>Harbor Drive and 32nd Street:</u> Same as the improvements for Wabash Boulevard and 32nd Street.

Figure 6-3 illustrates the intersection geometrics within Barrio Logan with the recommended intersection improvements listed above.

The following roadway segment improvements are recommended to mitigate the roadway segment cumulative impacts of the proposed Barrio Logan Community Plan Update with Alternative 2 land use scenario:

Commercial St/	National Ave/	National Ave/	Newton Ave/
16th St	16th St	Sigsbee St	Sigsbee St
Main St/	Harbor Dr/	Logan Ave/Beardsley St-	National Ave/
Sigsbee St	Sigsbee St	I-5 SB off-ramp	Beardsley St
Newton Ave/	Main St/	Harbor Dr/	Kearney St/
Beardsley St	Beardsley St	Beardsley St	Cesar Chavez Pkwy





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Kimley-Horn and Associates, Inc. 6-16 FIGURE 6-3 Horizon Year (2030) with Alternative 2 Improvements Intersection Geometrics

Logan Ave/	National Ave/	Newton Ave/	Main St/
Cesar Chavez Pkwy	Cesar Chavez Pkwy	Cesar Chavez Pkwy	Cesar Chavez Pkwy
Harbor Dr/	Logan Ave/	National Ave/	National Ave/
Cesar Chavez Pkwy	I-5 SB On-ramp	SR-75 Off-ramp	Evans St
Newton Ave/	Main St/	Logan Ave/	National Ave/
Evans St	Evans St	Sampson St	Sampson St
	22		





Kimley-Horn and Associates, Inc. 6-17 FIGURE 6-3.1 Horizon Year (2030) with Alternative 2 Improvements Intersection Geometrics

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Newton Ave/	Main St/	Harbor Dr/	National Ave/
Sampson St	Sampson St	Sampson St	Sicard St
National Ave/	National Ave/	Main St/	Harbor Dr/
26th St	27th St	26th St	Schley St
	30 T		
National Ave/	Boston Ave/	Main St/	Harbor Dr/
28th St	28th St	28th St	28th St





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Kimley-Horn and Associates, Inc. 6-18 FIGURE 6-3.2 Horizon Year (2030) with Alternative 1 Improvements Intersection Geometrics

Boston Ave/I-5 SB On-ramp	Main St/ 32nd St	Wabash Blvd/ 32nd St	Harbor Dr/ 32nd St		
37 		Add direct connector to Harbor Dr	Add direct connector to Wabash Blvd		
Main St /					
I-15 Ramps					







6-19 FIGURE 6-3.3 Horizon Year (2030) with Alternative 1 Improvements Intersection Geometrics

- Cesar Chavez Parkway between Logan Avenue and Harbor Drive: This roadway segment will be reclassified as a three-lane urban major facility between Logan Avenue and Main Street. Between Main Street and Harbor Drive, the roadway segment will be reclassified as a three-lane major arterial. A raised median will be installed between Harbor Drive and Logan Avenue. The roadway segment will have two lanes in the northbound direction and one lane in the southbound direction. On-street parking will be allowed between Logan Avenue and Main Street. A southbound right-turn auxiliary lane will be present between Main Street and Harbor Drive. The entire roadway segment should be considered for "sharrow" bicycle marking treatment and will be considered a class III bicycle facility.
- <u>28th Street between I-5 and National Avenue:</u> This roadway segment will be reconfigured as a four-lane major arterial with a five-foot raised median. The new configuration would allow for two-lanes in each direction and an auxiliary lane in the southbound direction.
- <u>National Avenue between Cesar Chavez and Evans Street</u>: This roadway segment will be reclassified as a two-lane collector with a two-way left-turn lane.
- <u>National Avenue between Sicard and 27th Street</u>: This roadway segment will be reclassified as a two-lane collector with a two-way left-turn lane.
- <u>Main Street between Evans Street and 26th Street:</u> This roadway segment will be reclassified as a two-lane collector with a two-way left-turn lane.

It is anticipated that traffic patterns within the community will be affected based on some of the improvements listed above. Fewer vehicles are anticipated to use the roadway segment of Boston Avenue between 28th Street and 29th Street. This is due to the proposed improvements along 28th Street and Main Street and the signalization of Boston Avenue and 29th Street intersection, which serves as an entrance ramp to the I-5 Southbound freeway. It is anticipated that more vehicles would use Main Street and 29th Street. **Figure 6-4** illustrates the peak-hour turning volumes within the community with the anticipated change in traffic patterns.

Table 6-5 displays the summary of the intersection peak-hour analysis with the proposed intersections and roadway segments improvements described above. As shown in the Table, with the implementation of the recommended improvements, all intersections within the study area would operate at LOS D or better with the following exceptions:

- Harbor Drive and 28th Street (will continue to operate at LOS E during the afternoon peak-hour period);
- 32nd Street and Wabash Street (will continue to operate at LOS F and LOS E during the morning and afternoon peak-hour periods, respectively); and
- Harbor Drive and 32nd Street (will continue to operate at LOS F during both peak-hour periods).

The Harbor Drive/32nd Street and 32nd Street/Wabash Street intersections are being studied further in an on-going Caltrans study. The latest report includes the installation of a unidirectional connector ramp from eastbound Harbor Drive to northbound State Route 15. Another improvement under study is the Vesta Street Overcrossing at Harbor Drive which would connect the wet and dry sides of the Naval Base San Diego. On November 1, 2010 the Navy temporarily closed the eastern leg (Norman Scott Road) of the 32nd Street/Norman Street-Wabash Street intersection to improve safety. The Navy is monitoring traffic to determine if this closure should remain. A preliminary analysis indicates that the mentioned projects would improve the intersection to acceptable levels and decrease the potential queuing problems.

Harbor Drive/28th Street is projected to operate at LOS E, even with improvements. There is the potential that improvements to be made between Harbor Drive and State Route 15 (Caltrans study) could divert some traffic off of 28th Street, further improving this intersection

SANDAGs 2050 Regional Transportation Plan (RTP) unconstrained network recommends the grade separation of the trolley lines at 28th Street and at 32nd Street. A peak-hour intersection analysis was conducted for the intersections of 28th Street and 32nd Street with Harbor Drive assuming these proposed grade separations. The results of the analysis indicated that the proposed grade separation would improve both intersections to LOS D or better during both peak-hour periods under the Horizon Year scenario with either alternative. The proposed grade separations are included in the "revenue constrained scenario". Due to the benefits to adjacent intersections, these grade separation projects are recommended.

Table 6-6 displays the summary of the roadway segment analysis with the roadway segment improvements described above. As shown in the table, the following roadway segments would continue to operate at LOS E or F even with the implementation of the recommended improvements:

- Sampson Street between National Avenue and Harbor Drive (LOS F);
- 26th Street between National Avenue and Main Street (LOS F);
- 28th Street between I-5 Ramps and Boston Avenue (LOS E);
- 29th Street between Boston Avenue and Main Street (LOS E):
- 32nd Street between Main Street and Wabash Street (LOS E): •
- Vesta Street between Main Street and I-5 Ramps (LOS E);
- Logan Avenue between Sigsbee Street and Cesar Chavez Parkway (LOS F);
- National Avenue between 16th Street and Sigsbee Street (LOS E);
- National Avenue between Sigsbee Street and Beardsley Street (LOS E); •
- National Avenue between Beardsley Street and Cesar Chavez Parkway (LOS F);
- Boston Avenue between 28th Street and 29th Street (LOS F);
- Boston Avenue between 29th Street and 32nd Street (LOS F); •
- Main Street between Cesar Chavez Parkway and Evans Street (LOS E);
- Main Street between Evans Street and 26th Street (LOS F); .
- Main Street between 26th Street and 28th Street (LOS F); Main Street between 28th Street and 29th Street (LOS E); Main Street between 29th Street and 32nd Street (LOS F);
- .
- Main Street between 32nd Street and Rigel Street (LOS F);
- Main Street between Rigel Street and Una Street (LOS F); and
- Main Street between Una Street and I-5 SB Off-ramp (LOS F).

Boston Avenue, National Avenue and 26th Street are desired by the community of Barrio Logan to be more pedestrian and bicycle friendly corridors. The widening of these roadways to improve vehicular circulation was not desired by the community. The vehicular operations along these three facilities could be congested during peak periods and vehicular speeds would be low. Additional widening is not recommended. Traffic calming measures should be evaluated along National Avenue to further enhance the pedestrian and bicycle circulation.

Additional improvements to the failing roadway segments of Sampson Street, 28th Street, 29th Street, 32nd Street, Vesta Street, Logan Avenue and Main Street are not recommended since the roadway segment analysis used in this study is based on theoretical capacities based on the number of travel lanes. The analysis does not take into account other physical features that can affect the capacity of a roadway segment like grades, number of traffic signals, number of driveways, parking availability, etc. In addition, the analysis does not take into account the different traffic peak periods experienced on these roadways due to the surrounding land uses. As an example, the Barrio Logan traffic patterns are unique in that they are heavily influenced by the Port of San Diego and the Navy Base traffic generators whose peak-hour of use do not correspond to typical peak-hour commuter traffic. Therefore, the typical planning level capacity for these streets may understate the carrying capacity of these roadways. To better represent the conditions of a roadway segment within the Barrio Logan community, the operations of the upstream and downstream intersections of each respective segment during the peak periods would indicate whether the roadway segment would have adequate capacity. As shown in the intersection analysis tables, all intersections along the failing roadway segments would operate at acceptable LOS.

In addition to the roadway segment improvements listed above, it is recommended that 28th Street between Harbor Drive and the I-5 Ramps be classified as a four-lane major arterial. For the segment between Harbor Drive and Main Street, a raised median should be installed with an entrance to the Navy Commissary. The proposed configuration would allow two lanes in each direction with an auxiliary lane for the heavy southbound right-turn movements at Harbor Drive. Parking would need to be removed along both sides of the roadway, with a total loss of approximately 20 parking spaces. The removed parking spaces are likely utilized by NASCO employees or Naval Base San Diego employees or visitors. Additional diagonal parking is recommended to be evaluated for installation along Boston Avenue between 28th Street and 29th Street to replace the loss of parking along 28th Street. The west side of the roadway could be widened by 4 feet to accommodate the proposed interim cross-sections. The east sidewalk will widen to 10 feet to enhance pedestrian circulation. This improvement is not part of mitigation for a roadway segment impact. The improvement is recommended to encourage heavy truck traffic to use 28th Street instead of Main Street and to provide for pedestrians. The ultimate recommended cross-section of 28th Street will include a designated bike lane along both sides of the roadway and a fourteen foot parkway. The ultimate configuration along 28th Street will require additional roadway widening and right-of-way acquisition. An alignment study is required to further define the extent of additional right-way needed and future widening

Conceptual roadway segments improvement figures, including the proposed cross-sections are included in **Appendix K**.

Based on the freeway segment capacity analysis included in this study, Alternative 2 land use scenario is considered to have a cumulative traffic related impact along the following freeway segments:

- I-5 from J Street to SR-75 Junction;
- I-5 from SR-75 Junction to 28th Street;
- I-5 from 28th Street to I-15 Interchange;
- I-5 from I-15 Interchange to Division Street; and
- I-15 from I-5 Interchange to Ocean View Boulevard

SANDAG's Draft 2050 Regional Transportation Plan (RTP) hybrid network includes the following freeway improvements:

- Operational freeway improvements along Interstate 5 between Interstate 15 and Interstate 8; and
- Addition of one (1) main lane and one (1) managed lane in each direction between Interstate 15 and State Route 54;

Both improvements listed above were included in the hybrid network's revenue constrained scenario, approved by SANDAG's board for further study on December 17th, 2010. The improvements included in the RTP are recommended to enhance the regional connectivity and accommodate the forecasted growth of the San Diego region. It should be noted that both land use alternatives presented on this plan would generate less traffic than the current adopted Community Plan land use alternative. Either proposed alternative would lessen, but not eliminate cumulative freeway traffic impacts.

In addition to the proposed freeway improvements listed in the SANDAG's Draft 2050 RTP, the following freeway access improvements are recommended within the Barrio Logan Community:

- Signalization of the intersection of Logan Avenue and Beardsley Street/ Interstate 5 SB off-ramp;
- Traffic signal modification at the intersection of Logan Avenue and Cesar Chavez Parkway (State Route 75 on-ramp);
- Signalization of the intersection of Boston Avenue and Interstate 5 SB on-ramp- 29th Street;
- Roadway improvements along 28th Street to accommodate an additional southbound lane, including the potential for widening the Interstate 5 overcrossing;
- Signalization of the intersection of 28th Street and Interstate 5 southbound off-ramp;
- Changes to the roadway striping along Main Street between 28th Street and 29th Street to facilitate freeway access to the Interstate 5 southbound on-ramp at Boston Avenue;
- Installation of a unidirectional connector ramp from eastbound Harbor Drive to northbound State Route 15 (under study by the Port of San Diego, and Caltrans);
- Construction of the Vesta Street Overcrossing at Harbor Drive (under study by the Navy);
- Coordination of City of San Diego and Navy related to the closure of the east leg of the 32nd Street and Norman Street-Wabash Street intersection (recently completed on a trial basis by the Navy); and
- Grade separation of the trolley tracks at the 28th Street and Harbor Drive and 32nd Street and Harbor Drive intersections (to be completed by SANDAG and part of the 2050 draft RTP).

The improvements listed above would decrease congestion along the major freeway access locations within the community.

Barrio Logan Co	mmunity Plan	Update					
 5 138 / 81 ⇔ 270 / 510 ∞ 43 / 36 16th St 	 № 112 / 119 ⇔ 299 / 493 ☆ 23 / 0 Commercial St 	 391 /70 ⇒ 36 /25 ∞ 65 /125 16th St 	∾ 34 / 25 ⇔ 495 / 458 ☆ 3 / 3 National Ave	 S 60 / 40 ⇔ 40 / 23 ∞ 16 / 6 Sigsbee St 	 S 36 / 28 ⇔ 377 / 254 ☆ 19 / 9 National Ave 	 8 79/38 ∞ 33/16 Sigsbee St 	 5. 51 / 23 ⇔ 80 / 50 ∞ 15 / 9 Newton Ave
17 / 68	15 /25	40/91 ở 194/347 ⇔ 40/31 ∿	40 /61 ≈ 34 /41 ⇔ 12 /7 ≌	11 / 35	65 /78 2 26 /58 4 58 /13 2	6 / 9	24 /20 전 111 /91 전 34 /12 안
5 3/2 ⇔ 96/60 ∞ 31/20 Sigsbee St	∾ 61/31 ⇔ 8/0 ∞ 31/38 Main St	 Point (100 / 70 Point (100 / 90 Sigsbee St 	∾ 20 / 100 ⇔ 1650 / 750 Harbor Dr	8 47 / 39 8 233 / 109 8 264 / 272 15 SB Off:Ramp	⇔ 209 / 160 2 88 / 40 Logan Ave	8 23 / 11 ⇔ 138 / 83 ∞ 213 / 188 Beardsley St	 5 66 / 77 ⇔ 432 / 358 2 239 / 113 National Ave
3 / 4	5 / 0 2 97 / 98 5 24 / 12 2	38 / 65		175 / 532 ⇔ ö 24 / 70 ∿ is 8	30 / 56 2 69 / 123 2	8 / 19	4 /9 & 30 /43 & 50 /132 &
6 41 /12 ⇔ 156 /94 ⊘ 56 /46 Beardstay St	∾ 15 / 19 ⇔ 82 / 93 ∞ 29 / 13 Newton Ave	5 52 /17 ⇔ 57 /39 ∞ 275 /144 Beardstay St	s. 76 / 79 ⇔ 109 / 33 ∞ 163 / 78 Main St	11 138 /70 Beardsley St	∾ 30 / 20 ⇔ 1580 / 820 Harbor Dr	 353 / 34 / 44 353 / 332 Cesar Chavez Pkwy 	© 205 / 167 ⇔ 278 / 173 ⊉ 615 / 517 Kearney Ave
18 / 7	13 /5 ≈ 23 /71 ⇔ 19 /37 ≌	15/22 ≈ 74/64 ⇔ 4/4 ∾	2 /0 ≈ 8 /25 ⇔ 52 /109 ≈	560 / 1950 ⇔			257 / 383 & 259 / 343 ⇔





6-24 FIGURE 6-4 Horizon Year (2030) with Alternative 2 Improvements Peak-Hour Turning Volumes

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Barrio Logan Co	Barrio Logan Community Plan Update								
№ 80 / 51 ⇔ 818 / 684 ⇔ 70 / 114 © 70 / 114 © Tony-Strate Playy-Str35 range	 № 76 / 90 ⇔ 350 / 350 ∞ 100 / 100 Logan Ave 	№ 310 / 410 ⇔ 765 / 550 ∞ 60 / 120 ∞ 60 / 120 ∞ 60 / 120 ∞ Forsavez Pkwy	 ⊾ 110 / 275 ⇔ 350 / 270 ≥ 120 / 110 National Ave 	12 150 / 60 00 / 170 ∞ 01 / 170 ∞ 02 / 170 ∞ 01 / 170 ∞ 02 / 170 ∞ 01 / 170 ∞ 02 / 170 ∞ 02 / 170 ∞ 03 / 170 ∞ 04 / 170 ∞ 05 / 05 ∞ 06 / 04 ∞ Newton Ave	2000 / 2	 № 190 / 270 ⇔ 350 / 250 ∞ 70 / 70 Main St 			
140 / 130	100 /140	190 / 300 ⊘ 250 / 400 ⇔ 190 / 290 ∿	100 /120	80 / 120	150 / 120	85 / 85 2 340 / 640 5 90 / 180 2			
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	 № 99 / 43 ⇔ 1056 / 467 2 80 / 30 Harbor Dr 	18 due We B S S S S S S S S S S S S S S S S S S	∾ 80 / 69 ⇔ 125 / 156 Logan Ave	19 60, 17, 187 60, 19, 19, 19, 19, 19, 19, 19, 19, 19, 19	5 28 / 70 ⇔ 18 / 23 ∞ 9 / 45 Evans St	 № 28 / 24 ⇔ 225 / 191 ☆ 38 / 34 National Ave 			
109 / 590	10 / 50 2 14 / 63 5 27 / 35 2	475 / 891	4 / 16	126 / 302 ⇔	16 / 35	27 / 12 2 48 / 18 5 25 / 62 2			
5 37 /21 ⇔ 30 /28 ∞ 7 /30 Evans St	s 30 / 27 ⇔ 63 / 70 ⊉ 16 / 27 Newton Ave	5 34/9 66/85 Evans St	∾ 75 / 68 ⇔ 427 / 284 Main St	23 52 52 52 52 52 52 52 52 52 52	54 121 / 109 ⇔ 124 / 98 ⊕ 62 / 132 Sampson St	 № 106 / 105 ⇔ 101 / 70 ∞ 48 / 21 National Ave 			
23 / 24	27.17 ~ 58./47 や 31./28 2	24 / 6		3986 / 443 0.1 / 101 0 0 0 101 / 124 0 0 1 0 388 / 443 0 1 1 1	78 / 166	7 /13 ∞ 107 /208 ⇔ 16 /30 ∞			



egend X / Y = AM / PM PEAK HOUR TURNING VOLUMES





Barrio Logan Co	mmunity Plan	Update				
5 39 /21 ⇔ 113 /76 ∞ 20 /21 Sampson St	∾ 37 / 33 ⇔ 79 / 73 ☆ 15 / 0 Newton Ave	205 /105 ⇔ 59 /27 ∞ 10 /8 Sampson St	∾ 16/8 ⇔ 282/113 ☆ 53/27 Main St	27 97 98 97 98 99 95 15 10 10 10 10 10 10 10 10 10 10	8 37 / 42 ⇔ 39 117 ∞ 4 / 4 Sicard St	≅ 3 / 1 ⇔ 164 / 125 ஜ 27 / 8 National Ave
23/35	7 / 13 2 48 / 103 5 32 / 20 2	81 / 134	52 /63	28 / 5 % 28 / 28 / 28 / 28 / 28 / 28 / 28 / 28	20 / 41	48 / 34 2 49 / 45 5 12 / 17 2
53 45 / 80 50 / 91 26th St 26th St	 № 48 / 54 ⇔ 222 / 123 ≥ 36 / 35 National Ave 	30	⇔ 279 / 239 ஜ 42 / 31 National Ave	31 ∞ 1 2 5 ∞ 1 2 5 ∞ 1 2 5 ∞ 1 2 5 ∞ 1 4 ∞ 1 46 / 50 Main St	32 99 / 29 8 v	∾ 17 / 39 ⇔ 1573 / 598 Harbor Dr
26 / 35	31 / 54 % 55 / 68 ⁽¹⁾ 15 / 34 %	151/373 ⇔ 7/14 ∾ 5 9	28 / 37 &	70 / 226 ⇔ 70 / 226 (70 / 20) 19 / 17 ⊗ 6 (7) 29 / 17 ⊗ 71 / 17 (7) 20 / 12 / 12) 20 / 12 / 12 / 12 / 12 / 12 / 12 / 12 /	86 / 108	
33 307 /102 ↔ 213 /210 ↔ 118 /195 28th St	 I26 / 241 599 / 406 186 / 448 National Ave 	34 34 280 / 350 /	 is 130 / 80 ⇔ 80 / 70 ≥ 50 / 70 Boston Ave 	35 9997 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 22 /13 4 15 /12 8 339 /480 28th St	∾ 115 / 255 ⇔ 943 / 531 ☆ 18 / 18 Harbor Dr
106 / 94	33 / 18 ∞ 102 / 98 ⇔ 82 / 163 ∞	250 / 350	90 / 50	190 / 220 Ø № № 400 / 730 ⇔ 09 / 100 50 / 40 № 09 / 021	70 / 170	0/10 ≈ 6/133 ⇔ 2/0 ≈



Legend X / Y = AM / PM PEAK HOUR TURNING VOLUMES





Barrio Logan C	ommunity Plan	Update			
37 	 № 96 / 132 ⇔ 107 / 86 20 / 20 Boston Ave 	38 89/157 100/132 000/12 0	39 67/8	40 012/09 2015/00 2015/00 2000 2015/0	34)
132 / 398 104 / 151 ⇒ 14 / 29 ∿	6 /10 2 186 /348 5 19 /45 2	36 / 63	65 112 2 5 3 6 5 3 6 5 5 5 5 5 110 5 5 120 12	90 / 160 Ø 641 / 1160 ↔ 140 / 100 % 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
108 / 120 در 108 / 122 - 158 Ramus	∾ 107 / 154 ⇔ 516 / 373 Main St				
37 / 255					





FIGURE 6-4.3

Horizon Year (2030) with Alternative 2 Improvements Peak-Hour Turning Volumes (cont.)

					5-5 IVE 2 WITH II ION LOS SUM		NTS
			ALTERN	ATIVE 2	ALTERNAT IMPROV		
	INTERSECTION	PEAK HOUR	DELAY (a)	LOS (b)	DELAY (a)	LOS (b)	DESCRIPTION OF IMPROVEMENT
2	National Asia & 16th St	AM	53.1	F	12.0	В	
2	National Ave & 16th St	PM	225.9	F	9.6	А	Install Traffic Signal.
		AM	ECL	F	12.6	В	
6	Harbor Dr & Sigsbee St	PM	ECL	F	7.3	А	Install Traffic Signal.
		AM	34.8	D	28.2	С	Install Traffic Signal. (This improvement requires Caltrans
7	Logan Ave & Beardsley St- I-5 SB ramp	PM	90.7	F	52.5	D	approval)
		AM	42.4	E	12.9	B	
8	National Ave & Beardsley St						Install Traffic Signal.
		PM	131.5	F	13.5	В	Modify raised median along Harbor Drive and restrict the
11	Harbor Dr & Beardsley St	AM	147.1	F	16.9	С	eastbound left-turn movements and southbound left-turn
		PM	50.6	F	11.3	В	movements.
13	Logan Ave & Cesar E. Chavez Pkwy	AM	31.8	С	27.1	С	Add exclusive eastbound right-turn lane. Add northbound right turn overlap phase. (This improvement requires Caltrans
		PM	66.5	Е	52.1	D	approval)
14	National Ave & Cesar E. Chavez Pkwy	AM	34.6	С	21.2	С	Add exclusive eastbound and westbound right-turn lanes. This improvement is recommended to mitigate a potential queing
		PM	52.5	D	24.4	С	impact.
16	Main St & Cesar E. Chavez Pkwy	AM	48.5	D	23.1	С	Add exclusive westbound right-turn lane. This improvement is
		PM	52.0	D	18.7	В	recommended to mitigate a potential queing impact.
17	Harbor Dr & Cesar E. Chavez Pkwy	AM	118.8	F	47.9	D	Add second eastbound left-turn lane. Add a southbound right- turn overlap phase. Add exclusive westbound right-turn lane.
		РМ	103.2	F	41.1	D	Add exclusive northbound right-turn lane. In addition, extend th westbound left-turn pocket (to be done by Caltrans).
23	Logan Ave & Sampson St	AM	178.3	F	10.6	В	Install Traffic Signal. Add northbound and southbound left-turn
25	Logan Ave & Sampson St	PM	240.2	F	24.0	С	lanes.
21		AM	8.4	А	8.4	А	Eliminate northbound through movement. This improvement is
31	Main St & 26th St-Schley St	PM	8.2	А	8.2	А	not needed based on a delay impact. It is part of a truck route improvement.
		AM	88.3	F	48.1	D	Eliminate southbound left/through movement. Add southbound
32	Harbor Dr & Schley St	PM	30.3	С	16.7	В	right-turn overlap phase.
22		AM	79.6	E	39.0	D	
33	National Ave & 28th St	PM	66.8	E	45.9	D	Add exclusive southbound right-turn lane.
24	Destan Asia & 28th St	AM	27.8	С	22.3	С	Add southbound through lane and remove exclusive northbound
34	Boston Ave & 28th St	PM	68.8	Е	45.1	D	right-turn lane (part of 28th St improvements).Add exclusive eastbound right-turn lane.
36	Harbor Dr & 28th St (c)	AM	45.6	D	43.6	D	Add second eastbound and southbound left-turn lanes.
50		PM	97.4	F	83.0	F	And second castoound and solutioound ten-turn lanes.
37	Boston Ave & I-5 SB On-ramp-29th St	AM	28.3	D	22.6	С	Install Traffic Signal. (This improvement requires Caltrans
	- ·· r ·· ··	PM	ECL	F	44.5	D	approval)
39	32nd St & Wabash St	AM	130.6	F	119.4	F	
		PM	85.1	F	75.4	E	Construct a direct connector from Harbor Dr. to Wabash St. (under study by Caltrans)
40	Harbor Dr & 32nd St (c)	AM PM	144.3 89.0	F	121.3 81.5	F	(under study by Califans)
		AM	The intersec		14.1	В	Install Traffia Signal (This immediate of the second secon
42	I-5 SB off-ramp & 28th St	PM		r this scenario	4.9	A	Install Traffic Signal. (This improvement requires Caltrans approval)

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Bold values indicate intersections operating at LOS E or F.

(a) Delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. At a two-way stop-controlled intersection, delay refers to the worst movement.

(a) Delay relets to in a veringe control delay for the entire intersection, measured in seconds per venue; At a two-way stop-controlled intersection, delay refers to the works movement. (b) LOS calculations are based on the methodology outlined in the 2000 Highway Capacity Manual and performed using Synchro 6.0 (c) As part of Sandag's Draft 2050 RTP, a grade separation for the trolley lines at this intersection is being proposed under the hybrid network which is the preferred revenue constrained network . With the grade separation, the intersection would operate at LOS D or better. See appendix L for synchro results. K:SND_TPTO/095707000Excel(707000IN0Lism]At2mit

но	TABLE 6-6 RIZON YEAR (2030) ALTERNATIVE 2 W ROADWAY SEGMENT LOS SU		IENTS			
		HIGHEST ACCEPTABLE		YEAR 2030 (ALTERNATIVE 2) WITH IMPROVEMENTS		
ROADWAY SEGMENT	ROADWAY CLASSIFICATION (a)	LOS D VOLUME	LOS E CAPACITY	ADT	V/C RATIO (b)	LOS
Cesar Chavez Pkwy					1 1	
north of Logan Ave	3 Lane Collector (with TWLT)	18,750	22,500	15,800	0.702	D
between Logan Ave and National Ave	3 Lane Urban Major	26,250	30,000	26,200	0.873	D
between National Ave and Newton Ave between Newton Ave and Main St	3 Lane Urban Major 3 Lane Urban Major	26,250 26,250	30,000 30,000	26,100 21,800	0.870	D C
between Mewton Ave and Main St between Main St and Harbor Dr	3 Lane Major	26,250	30,000	12,700	0.727	В
Sampson St	5 Laite Wajoi	20,230	30,000	12,700	0.425	Б
between I-5 and National Ave	2 Lane Collector (No TWLT)	6,500	8,000	5,700	0.713	D
between National Ave and Harbor Dr	2 Lane Collector (No TWLT) 2 Lane Collector (No TWLT)	6,500	8,000	8,700	1.088	F
26th St	2 Lane Concelor (No TWET)	0,500	0,000	0,700	1.000	Ľ
between National Ave and Main St	2 Lane Collector (No TWLT)	6,500	8,000	8,300	1.038	F
28th St		0,000	0,000	0,000	1.000	-
between I-5 and Boston Ave	4 Lane Major Arterial	35,000	40,000	36,600	0.915	Е
between Boston Ave and Main St	4 Lane Major Arterial	35,000	40,000	24,300	0.608	C
between Main St and Harbor Dr	4 Lane Major Arterial	35,000	40,000	23,700	0.593	c
29th St	· Lane major ruteran	55,000		,100	0.070	~
between Boston Ave and Main St (c)	2 Lane Collector (No TWLT)	6,500	8,000	6,800	0.850	Е
32nd St		.,	0,000	0,000		-
between Main St and Wabash Blvd	2 Lane Collector (with TWLT)	13,000	15,000	14,100	0.940	Е
between Wabash Blvd and Harbor Drive	4 Lane Major Arterial	35,000	40,000	26,700	0.668	С
Rigel St	¥		,	,		
between Main St and I-5	2 Lane Collector (No TWLT)	6,500	8,000	1,400	0.175	А
Vesta St	<u> </u>	•			• •	
between Main St and I-5	2 Lane Collector (No TWLT)	6,500	8,000	6,600	0.825	Е
Logan Ave						
between 17th St and Sigsbee St	2 Lane Collector (with TWLT)	13,000	15,000	10,800	0.720	D
between Sigsbee St and Cesar Chavez Pkwy	2 Lane Collector (with TWLT)	13,000	15,000	17,000	1.133	F
between Cesar Chavez Pkwy and 26th St	2 Lane Collector (with TWLT)	13,000	15,000	6,000	0.400	В
National Ave						
between 16th St and Sigsbee St	2 Lane Collector (with TWLT)	13,000	15,000	13,200	0.880	Е
between Sigsbee St and Beardsley St	2 Lane Collector (with TWLT)	13,000	15,000	13,200	0.880	Е
between Beardsley St and Cesar Chavez Pkwy	2 Lane Collector (with TWLT)	13,000	15,000	17,100	1.140	F
between Cesar Chavez Pkwy and Evans St	2 Lane Collector (with TWLT)	13,000	15,000	9,200	0.613	С
between Evans St and Sicard St	2 Lane Collector (with TWLT)	13,000	15,000	8,900	0.593	С
between Sicard St and 27th St	2 Lane Collector (with TWLT)	13,000	15,000	10,200	0.680	D
Boston Ave		1		1	1 1	
between 28th and 29th St (c)	2 Lane Collector (No TWLT)	6,500	8,000	16,400	2.050	F
between 29th St and 32nd St	2 Lane Collector (No TWLT)	6,500	8,000	8,900	1.113	F
Main St		1		1	<u> </u>	
between Beardsley St and Cesar Chavez Pkwy	2 Lane Collector (No TWLT)	6,500	8,000	5,700	0.713	D
between Cesar Chavez Pkwy and Evans St	2 Lane Collector (No TWLT)	6,500	8,000	9,400	1.175	F
between Evans St and 26th St	2 Lane Collector (with TWLT)	13,000	15,000	15,400	1.027	F
between 26th St and 28th St	3 Lane Collector (No TWLT)	9,750	11,250	13,600	1.209	F
between 28th and 29th St	4 Lane Collector (No TWLT)	13,000	15,000	14,000	0.933	E
between 29th St and 32nd St	3 Lane Collector (No TWLT)	9,750	11,250	19,300	1.716	F
between 32nd St and Rigel St	4 Lane Collector (No TWLT)	13,000	15,000	25,800	1.720	F
between Rigel St and Una St	2 Lane Collector (with TWLT)	13,000	15,000	20,300	1.353	F
between Una St and I-5 SB Off Ramp	2 Lane Collector (with TWLT)	13,000	15,000	17,800	1.187	F
Harbor Dr		25 000	40.000	20,400	0.7/0	P
between Beardsley St and Cesar Chavez Pkwy	4 Lane Major Arterial	35,000	40,000	30,400	0.760	D
between Cesar Chavez Pkwy and Sampson St	4 Lane Major Arterial	35,000	40,000	26,000	0.650	C
between Sampson St and Schley St	4 Lane Major Arterial	35,000	40,000	24,800	0.620	C
between Schley St and 28th St	4 Lane Major Arterial	35,000	40,000	20,200	0.505	B
between 28th St and 32nd St between 32nd St and Vesta St	4 Lane Major Arterial	35,000	40,000	28,100	0.703	С
	4 Lane Major Arterial	35,000	40,000	32,200	0.805	D

Bold values indicate roadway segments operating at LOS E or F.

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(a) Roadway Classification are proposed under the Mobility Element.
 (b) The v/c Ratio is calculated by dividing the ADT volume by each respective roadway segment's capacity.

c) This segment was analyzed assuming a rerouting of traffic produced by the improvements along 28th Street and Main Street. A total of 1000 ADT were moved from Boston Avenue between 28th St and 29th St to Main St and 29th St.

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