Matrix Design Group, Inc.
707 17th Street, Suite 3150
Denver, CO 80202
O 303.572.0200
F 303.572.0202
matrixdesigngroup.com

July 28, 2022

Mr. Robert Wahl
JHL Constructors
9100 E Panorama Dr Ste 300
Englewood, CO

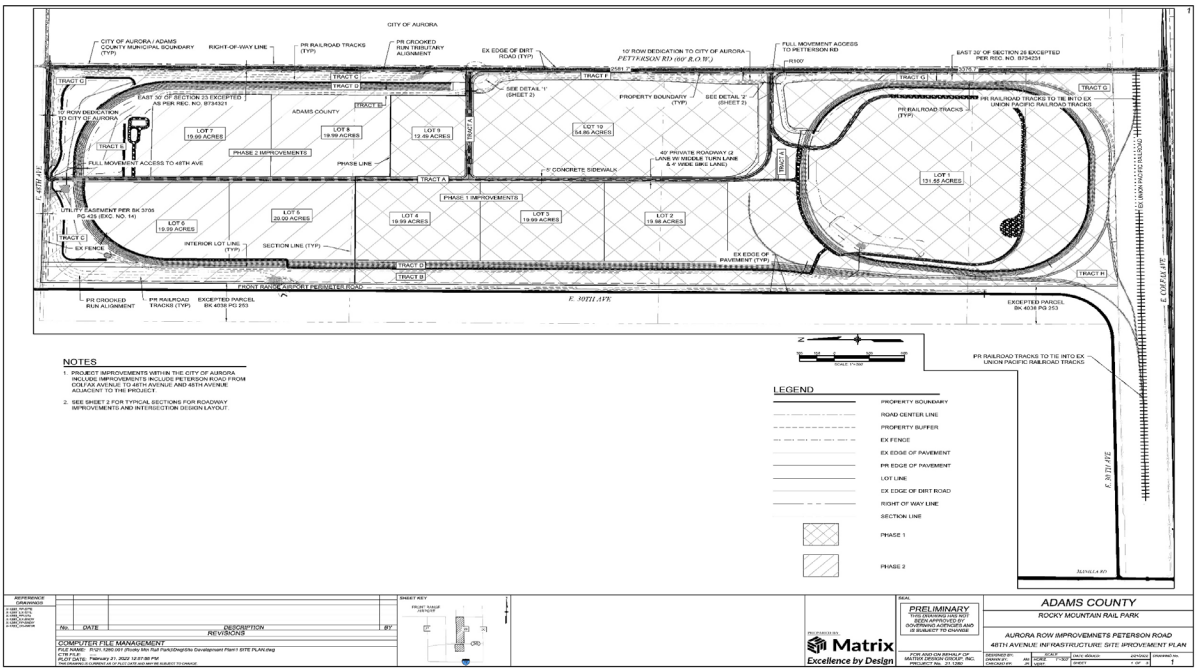
RE: Rocky Mountain Rail Park Traffic Impact Study – North Area

This memo serves as an addendum to the Rocky Mountain Rail Park (RMRP) Master Traffic Impact Study (MTIS) dated January 2020. The purpose of this addendum is to demonstrate that the proposed land uses for the north section have decreased in intensity from the MTIS. Additionally, the MTIS did not necessarily reflect the details of the nearby Transport Colorado development nor did the Transport Colorado traffic impact study reflect the impacts of RMRP. This addendum will demonstrate the impacts of both developments on the surrounding transportation system in the horizon year (2040). The Northeast Area Transportation Study Refresh (NEATS) demand model was used as the basis of both Rocky Mountain Rail Park (RMRP) MTIS and Colorado Transport TIS and was also used in this memo as the basis of 2040 background conditions.

Study Area

Rocky Mountain Rail Park North is a proposed rail-served industrial park that will be located on the northwest corner of Colfax Avenue and Peterson Road in Adams County. Colorado. The proposed development is 469-acres that consists of industrial park and a concrete and asphalt batch plant, while the entire project (north and south area) includes 691 acres of Industrial Park and Concrete Batch Plant. Figure 1 shows the RMRP site plan

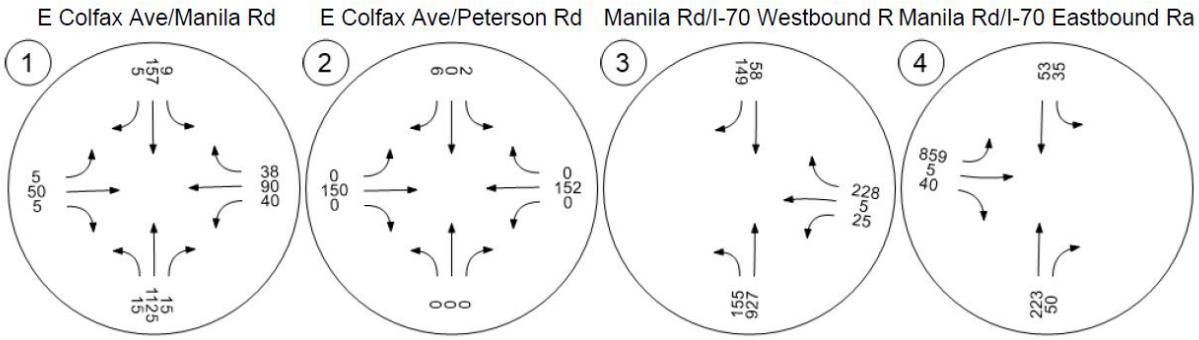
Figure 1- Rocky Mountain Rail Park North Site Plan



2040 Background Conditions

2040 Transport Colorado TIS and RMRP MTIS were used to capture the level of development in this time frame. The NEATS Refresh (2018) provides a travel demand model as well as future land use data for the study area and was used as the basis of Transport Colorado TIS. For this purpose, the NEATS background model was adjusted to reflect zero land use in Transport Colorado TIS study area, then the anticipated trips were added to the model. To address the future conditions on the roadway network, Matrix used the combination of Adjusted NEATS 2040 background, Transport Colorado-Subarea 1 traffic volumes, and RMRP South section volumes as the 2040 background volumes. Colorado Transport Subarea 1 is planned to be built by approximately 2040 as the first parcel of this development on the west side of RMRP North Area. Figure 2 and Figure 3 Show the 2040 traffic conditions without the RMRP North Section in AM and PM peak hours, respectively.

Figure 2- 2040 No Project Conditions (AM Peak Hour)



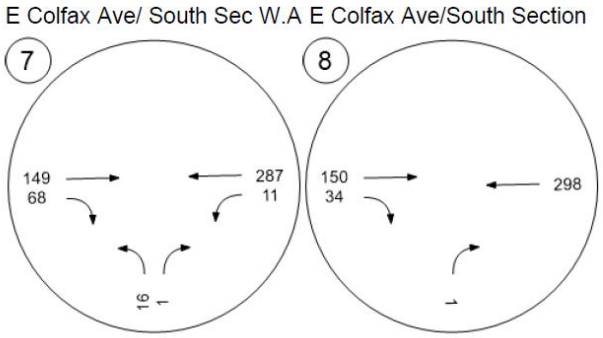
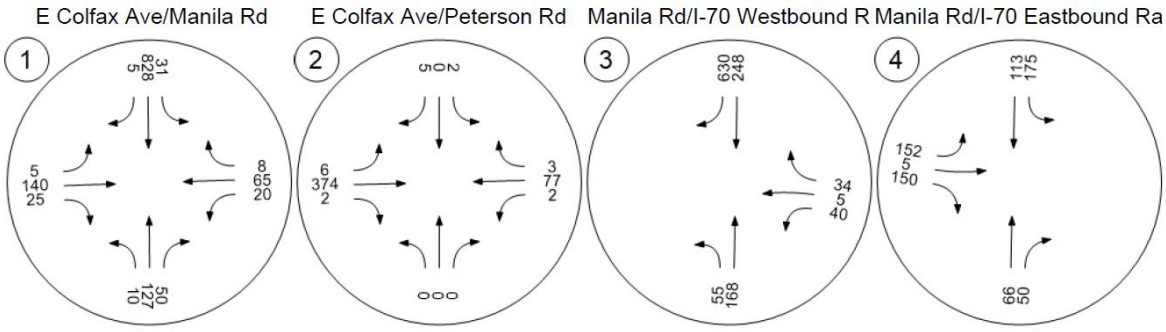


Figure 3- 2040 No Project Conditions (PM Peak Hour)



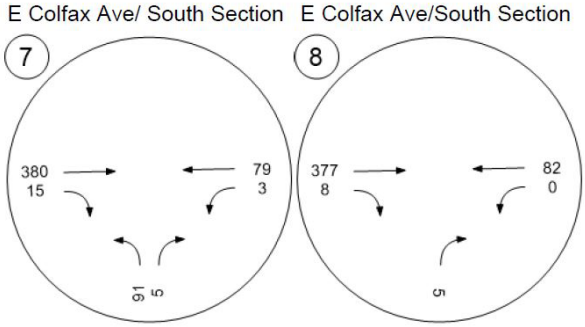
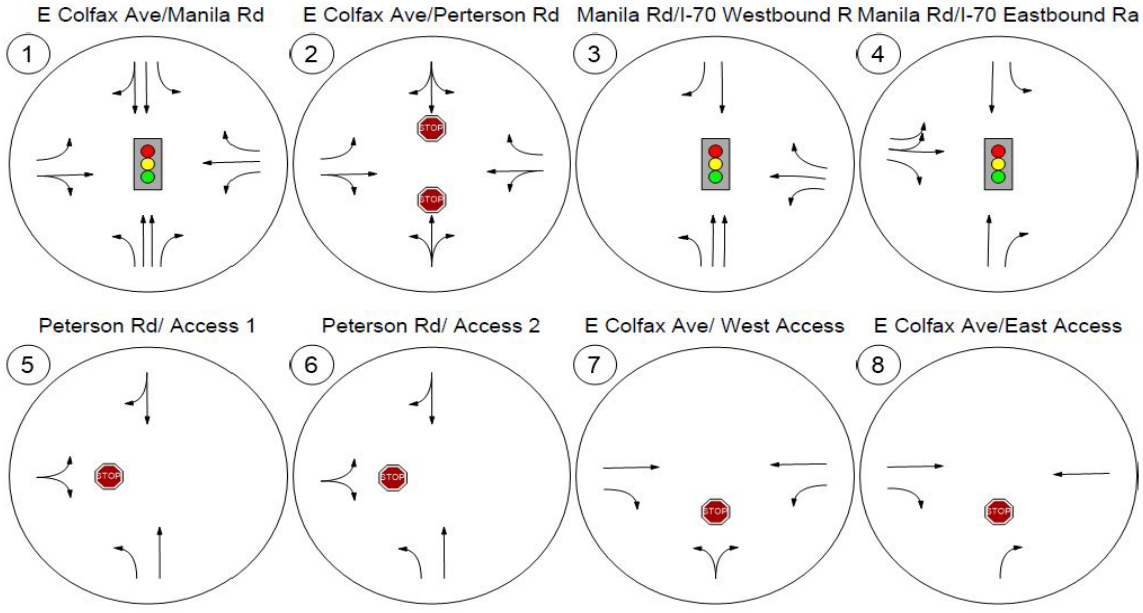


Figure 4- 2040 Background Daily Traffic Volumes

All the laneage, turn lane configurations, and traffic control recommendations for the 2040 background conditions were obtained from NEATS (2018), Transport Colorado(2019) and RMRP MTIS(2020) and are shown in Figure 5.

Figure 5- 2040 Background Intersection Configurations



Analysis of the intersections and roadways for horizon conditions with the volumes and configurations shown above results in the operations shown in Tables 1-12

Table 1- Horizon No Project Colfax Ave/Manila Rd Intersection Operations (AM Peak Hour)

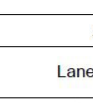
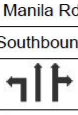
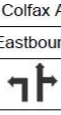
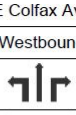
Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	8.04	14.29	7.96	28.66	11.47	11.47	14.64	12.27	12.27	14.69	12.86	11.86
Movement LOS	A	B	A	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	14.17			12.39			12.48			13.23		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.82											
Intersection LOS	B											
Intersection V/C	0.456											

Table 2- Horizon No Project Colfax Ave/Peterson Rd Intersection Operations (AM Peak Hour)

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Movement, Approach, & Intersection Results												
V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.81	11.12	9.18	10.82	11.17	9.24	7.67	0.00	0.00	7.67	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.37			9.63			0.00			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	0.25											
Intersection LOS	B											

Table 3- Horizon No Project Manila Rd/I-70 WB Ramp Intersection Operations (AM Peak Hour)

Intersection Setup

Name	Manila Rd			Manila Rd						Westbound Ramp		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	4.64	4.43	0.00	0.00	2.68	2.81	0.00	0.00	0.00	22.09	21.59	26.32
Movement LOS	A	A			A	A				C	C	C
d_A, Approach Delay [s/veh]	4.46			2.76			0.00			25.42		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	6.52											
Intersection LOS	A											
Intersection V/C	0.416											

Table 4- Horizon No Project Manila Rd/I-70 EB Ramp Intersection Operations (AM Peak Hour)

Name	Manila Rd		Manila Rd			Eastbound Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	0.00	12.22	9.58	7.85	7.56	0.00	23.09	23.08	12.81	0.00	0.00	0.00
Movement LOS		B	A	A	A		C	C	B			
d_A, Approach Delay [s/veh]	11.95			7.68			22.86			0.00		
Approach LOS	B			A			C			A		
d_I, Intersection Delay [s/veh]	19.55											
Intersection LOS	B											
Intersection V/C	0.453											

Table 5- Horizon No Project Colfax Avenue/South Section West Access Intersection Operations (AM Peak Hour)

Name			E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.97	9.38	0.00	0.00	7.84	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	2.41	2.41	0.00	0.00	0.65	0.00
d_A, Approach Delay [s/veh]	11.81		0.00		0.29	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.54					
Intersection LOS	B					

Table 6- Horizon No Project Colfax Avenue/South Section West Access Intersection Operations (AM Peak Hour)

Name		E Colfax Ave		E Colfax Ave	
Approach	Northbound	Eastbound		Westbound	
Lane Configuration					
Movement, Approach, & Intersection Results					
V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.17	0.00	0.00	0.00	0.00
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.09	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.17		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	A					

Table 7- Horizon No Project Colfax Ave/Manila Rd Intersection Operations (PM Peak Hour)

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	12.71	11.12	10.83	16.72	23.01	23.01	10.90	10.51	10.51	12.67	9.43	8.81
Movement LOS	B	B	B	B	C	C	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	11.17			22.79			10.53			10.13		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	18.90											
Intersection LOS	B											
Intersection V/C	0.382											

Table 8- Horizon No Project Colfax Ave/Peterson Rd Intersection Operations (PM Peak Hour)

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Movement, Approach, & Intersection Results												
V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.56	12.69	10.61	12.55	12.72	8.85	7.52	0.00	0.00	8.25	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.03	0.03	0.03	0.01	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.72	0.72	0.72	0.32	0.00	0.00	0.08	0.08	0.00
d_A, Approach Delay [s/veh]	11.96			9.91			0.12			0.20		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	0.28											
Intersection LOS	B											

Table 9- Horizon No Project Manila Rd/I-70 Westbound Ramp Intersection Operations (PM Peak Hour)

Name	Manila Rd			Manila Rd						Westbound Ramp		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	3.88	1.94	0.00	0.00	2.55	3.23	0.00	0.00	0.00	25.36	23.98	24.53
Movement LOS	A	A			A	A				C	C	C
d_A, Approach Delay [s/veh]	2.42			2.93			0.00			25.02		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	4.41											
Intersection LOS	A											
Intersection V/C	0.274											

Table 10- Horizon No Project Manila Rd/I-70 Eastbound Ramp Intersection Operations (PM Peak Hour)

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	0.00	8.62	8.29	13.24	9.11	0.00	12.61	12.61	12.78	0.00	0.00	0.00
Movement LOS		A	A	B	A		B	B	B			
d_A, Approach Delay [s/veh]	8.53			11.62			12.66			0.00		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	11.56											
Intersection LOS	B											
Intersection V/C	0.225											

Table 11- Horizon No Project Colfax Avenue/South Section West Access Intersection Operations (PM Peak Hour)

Name	South Sec W.Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.17	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.27	12.12	0.00	0.00	8.31	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.65	0.65	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	16.24	16.24	0.00	0.00	0.21	0.00
d_A, Approach Delay [s/veh]	13.21		0.00		0.30	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.26					
Intersection LOS	B					

Table 12- Horizon No Project Colfax Avenue/South Section East Access Intersection Operations (AM Peak Hour)

Name	South Sec E.Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.67	0.00	0.00	8.27	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.59	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.67		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	B					

Trip Generation

The developable area of the RMRP North Section consists of 131 Acres of Paving Operation Plant and 207.35 Acres of Industrial Park. To be consistent with RMRP MTIS, it was assumed that there would be two employees per acre in the industrial park. Since acreage of paving plant has not been changed since the previous study, the daily and peak hour trips were directly imported from RMRP MTIS. Table 1 shows the trips that are expected to be generated by RMRP in the horizon year.

Table 13 Rocky Mountain Rail Park North Area Trip Generation

Rocky Mountain Railpark North Area											
ITE Land Use and Code	Size	Units	Weekday			AM Peak Hour			PM Peak Hour		
			Total	Entering	Exiting	Total	Entering	Exiting	Total	Entering	Exiting
130 - Industrial Park	207.35	Acres	1702	851	851	207	178	29	220	44	176
Paving Operation Plant - Truck Trips	131	Acres	534			44	22	22	44	22	22
Paving Operation Plant - Employees	131	Acres	150			50	50	0	50	0	50
Total			2386			301	250	51	314	66	248

Trip distributions and trip assignments in the MTIS were also used in this study and results are shown in Figure 6-9.

Figure 6 – Rocky Mountain Project Trips (AM Peak Hour)

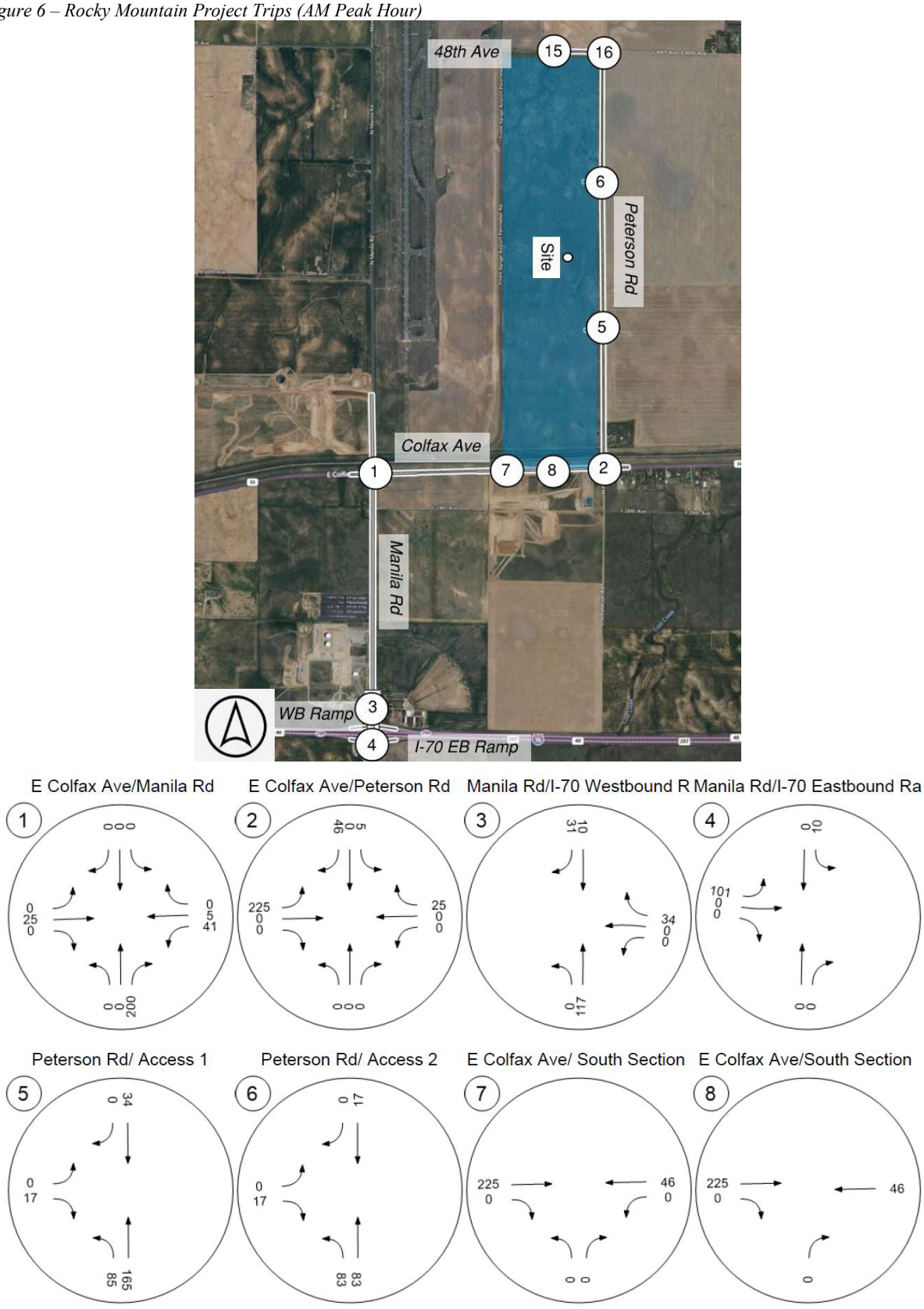
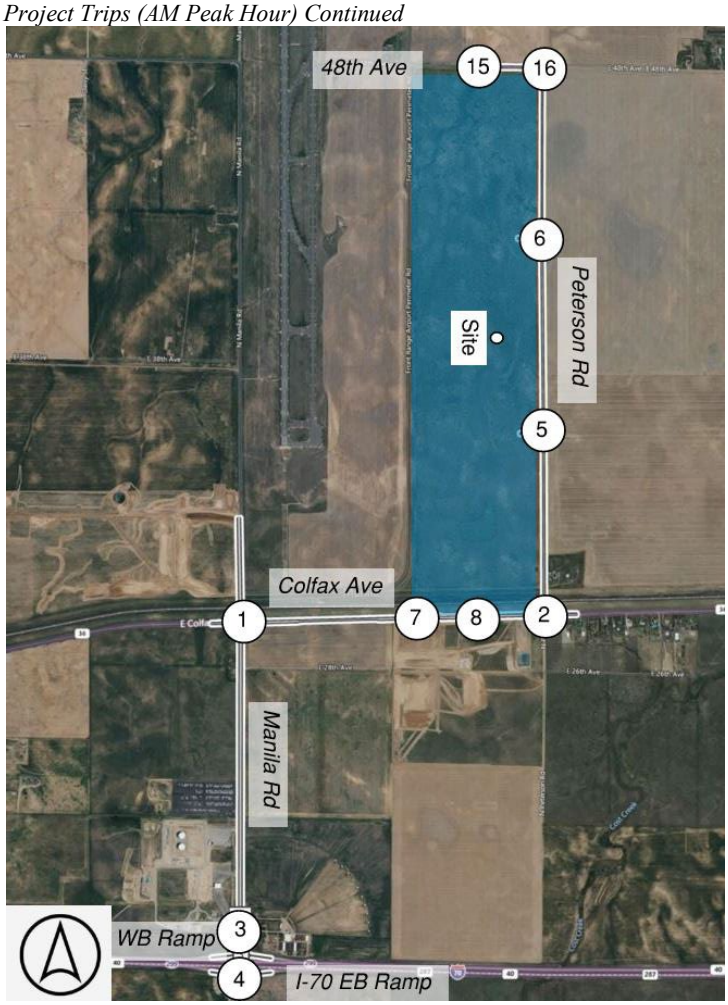


Figure 7- Rocky Mountain Project Trips (AM Peak Hour) Continued



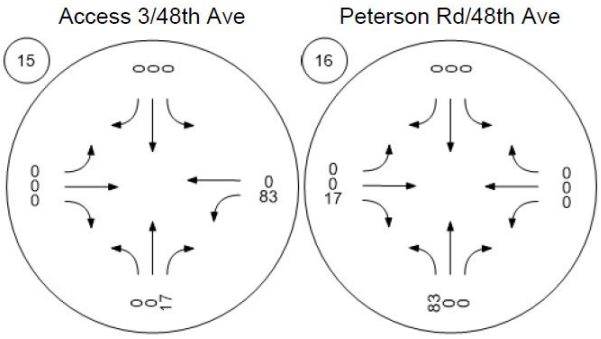


Figure 8 – Rocky Mountain Project Trips (PM Peak Hour)

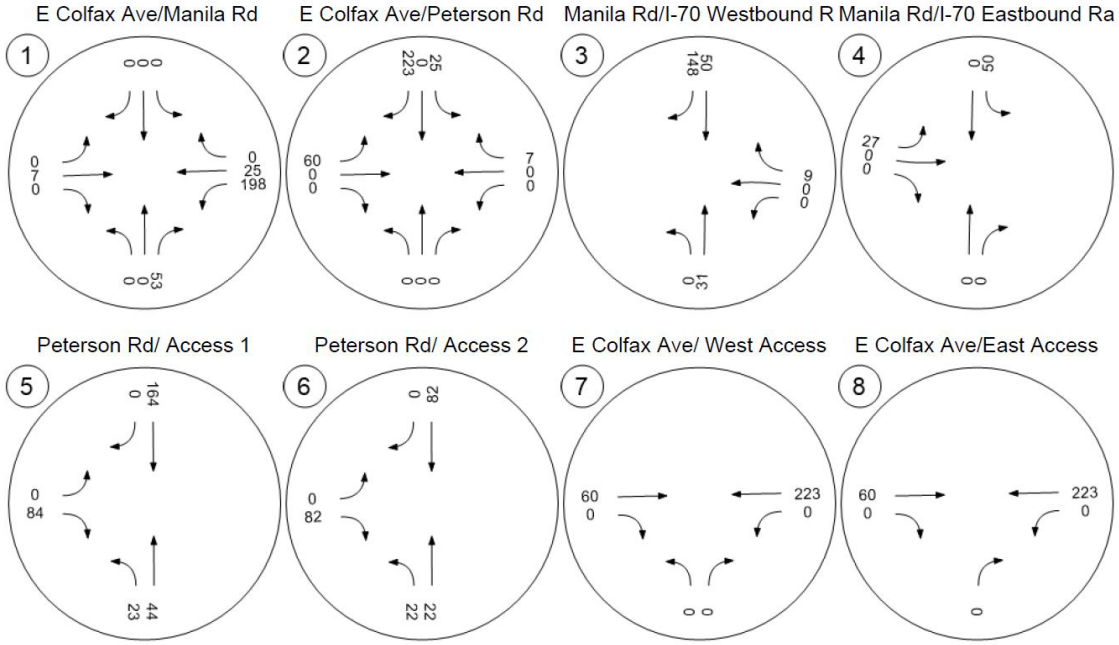
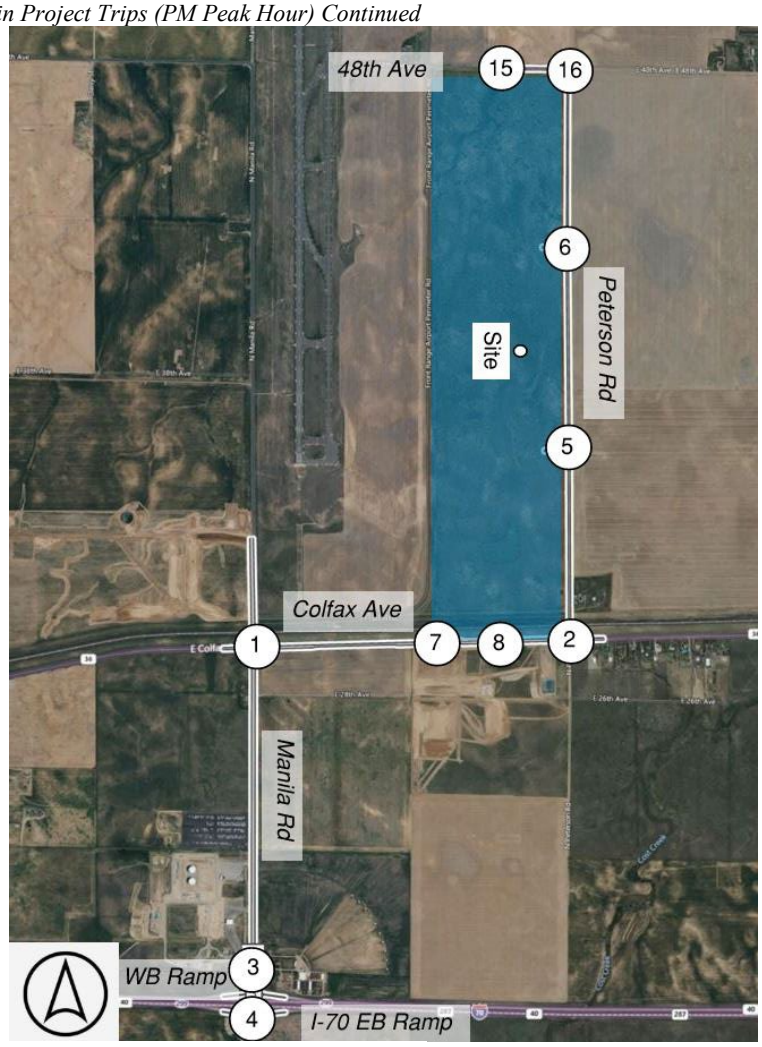
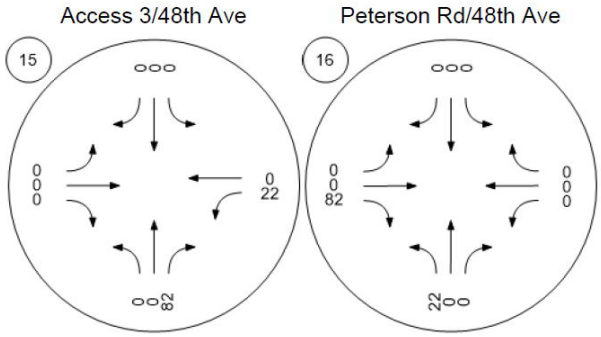


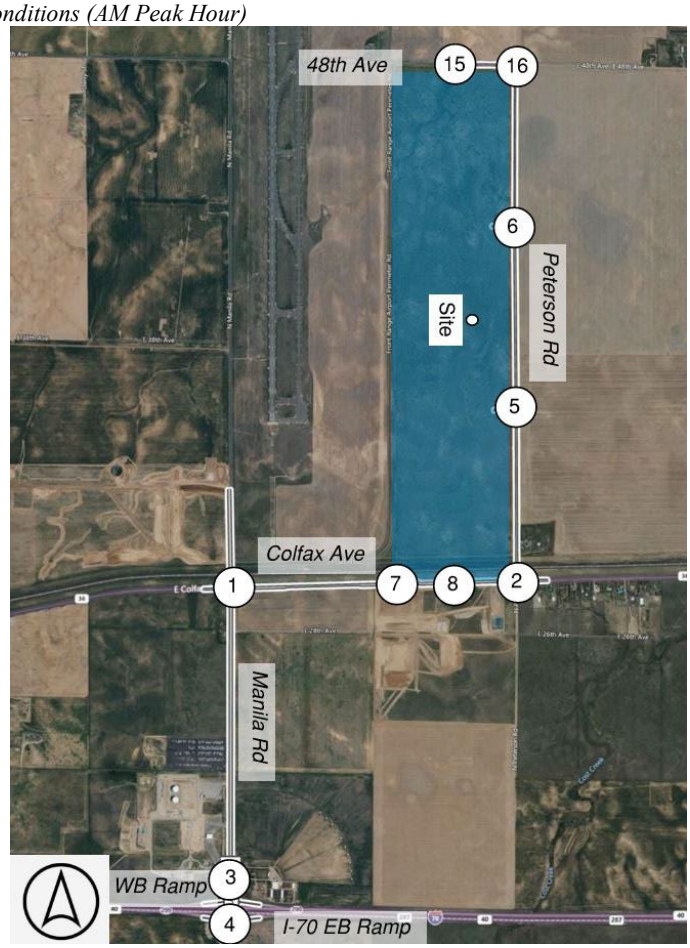
Figure 9- Rocky Mountain Project Trips (PM Peak Hour) Continued





Aggregating the background volumes with site trips result in Figure 10-13

Figure 10- Horizon Total Conditions (AM Peak Hour)



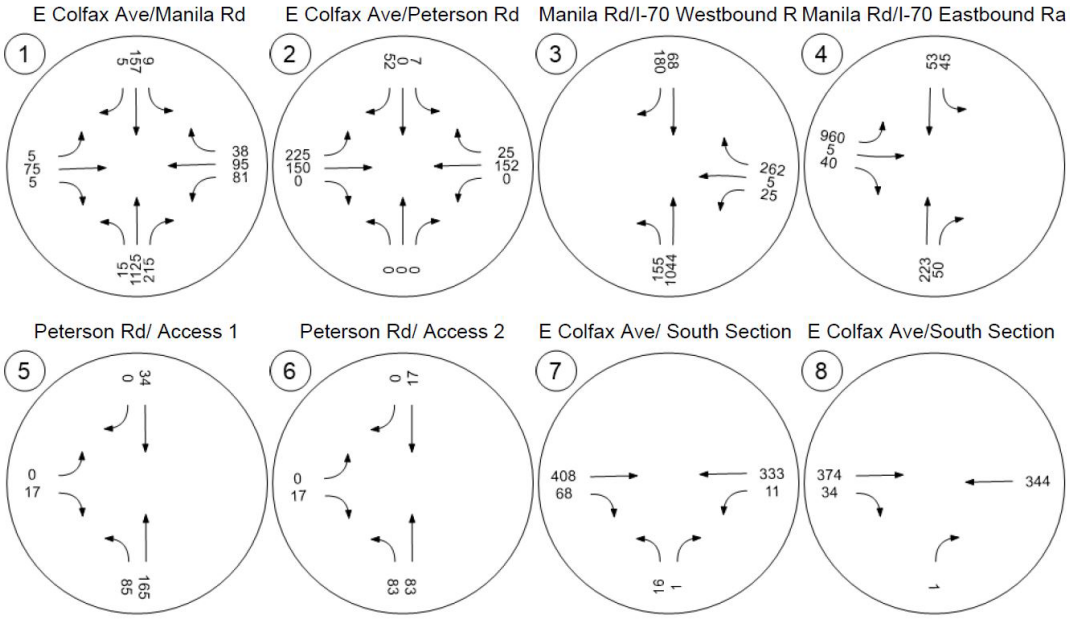
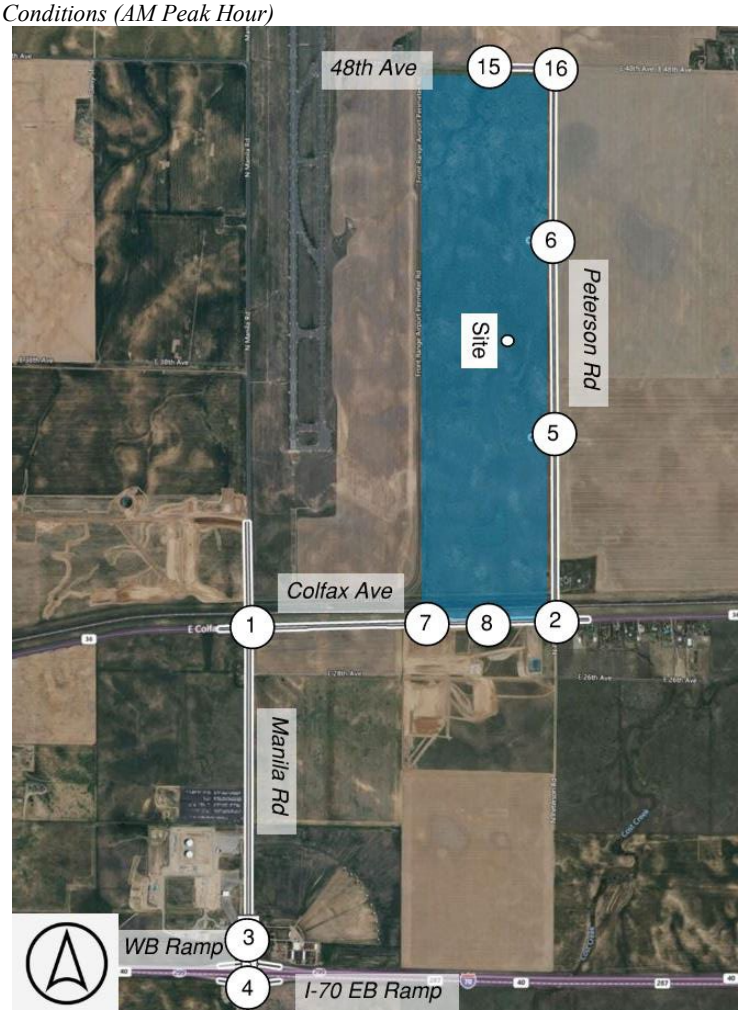


Figure 11- Horizon Total Conditions (AM Peak Hour)



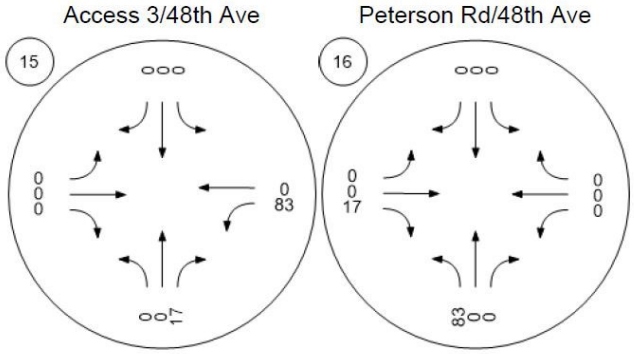
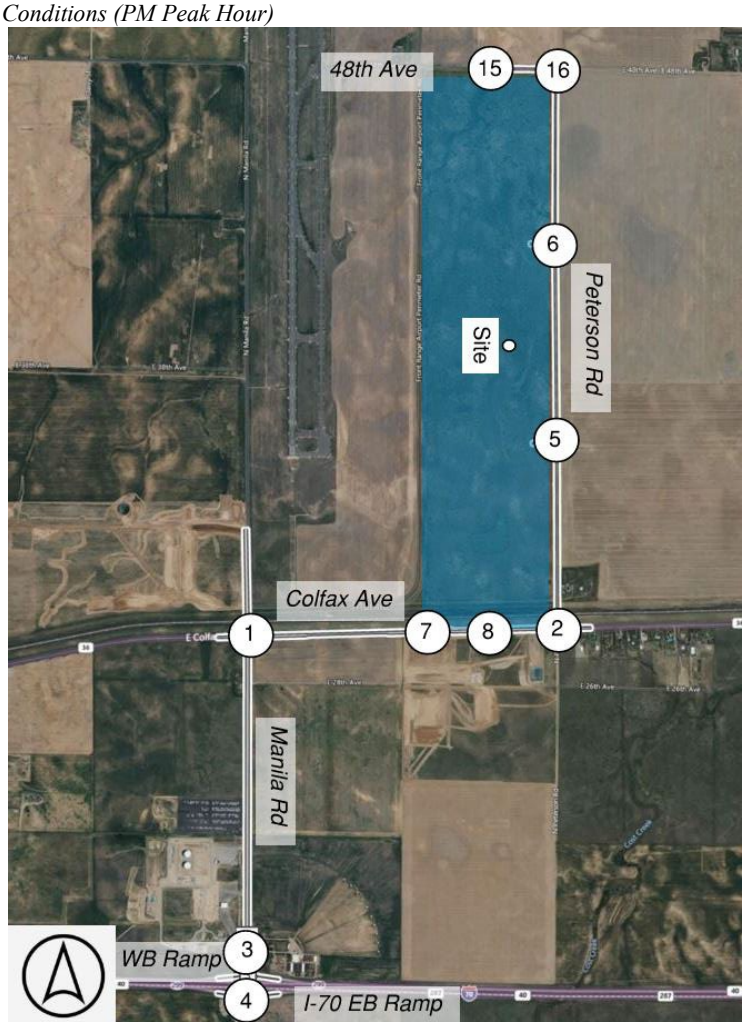


Figure 12- Horizon Total Conditions (PM Peak Hour)



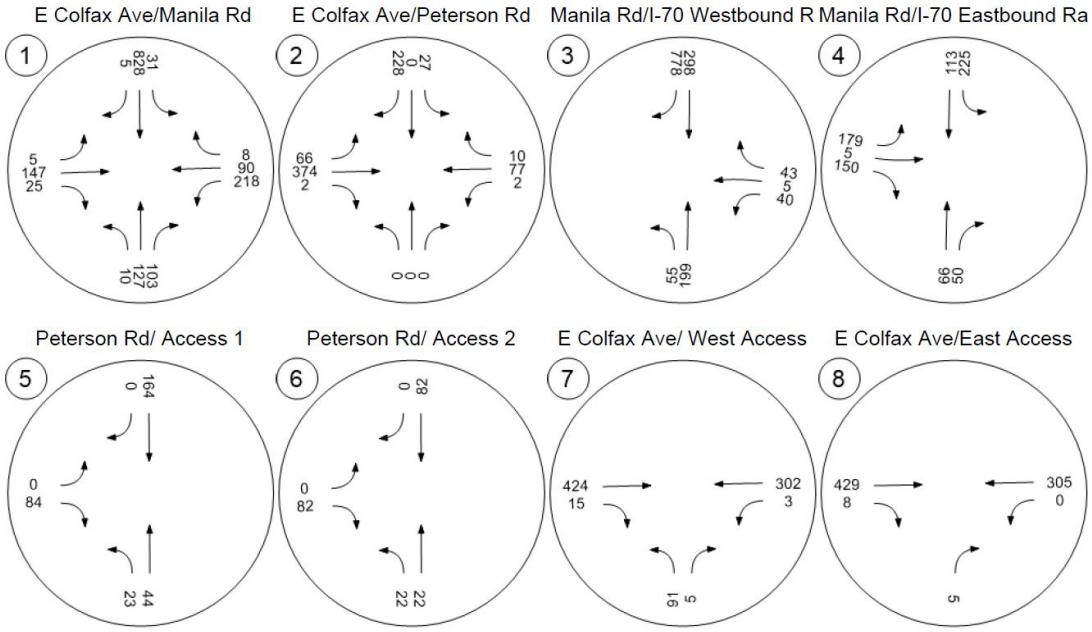
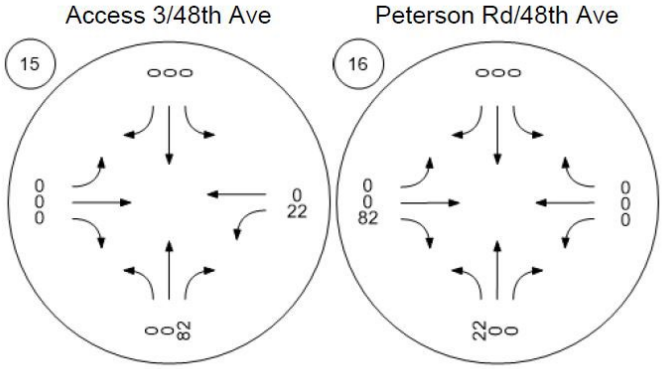
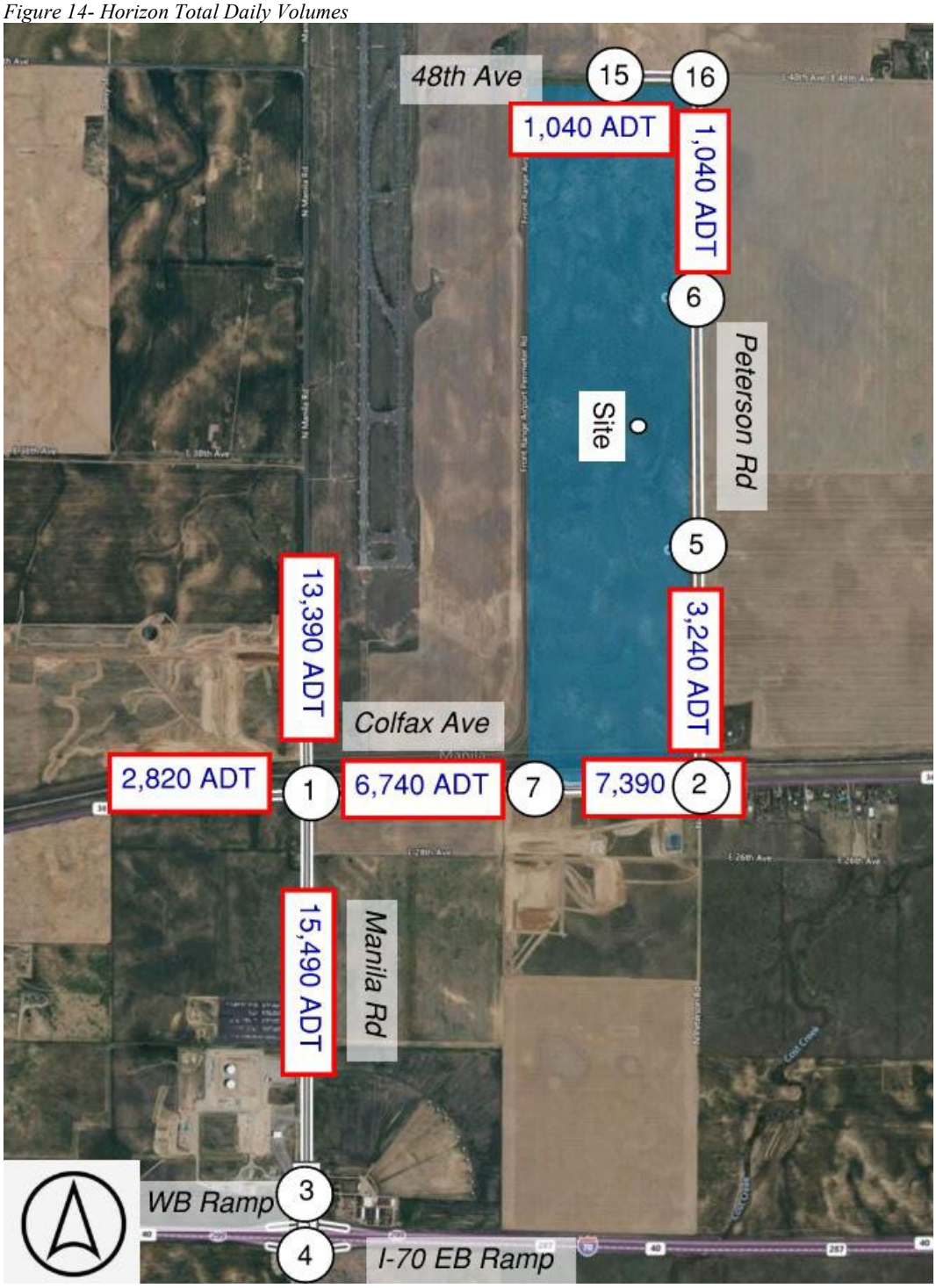


Figure 13- Horizon Total Conditions (PM Peak Hour)



Horizon total daily volumes for 2040 are shown in Figure 14.

Figure 14- Horizon Total Daily Volumes



Intersection operations are shown in Tables 14- 32

Table 14- Horizon With Project Colfax Ave/Manila Rd Intersection Operations (AM Peak Hour)

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	7.75	13.64	8.43	28.79	11.15	11.15	14.90	13.13	13.13	16.52	13.43	12.29
Movement LOS	A	B	A	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.12			12.10			13.24			14.60		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.20											
Intersection LOS	B											
Intersection V/C	0.472											

Table 15- Horizon With Project Colfax Ave/Peterson Rd Intersection Operations (AM Peak Hour)

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
V/C, Movement V/C Ratio	0.00	0.00	0.00	0.03	0.00	0.06	0.17	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	20.21	18.90	9.18	19.53	18.95	9.71	8.29	0.00	0.00	7.67	0.00	0.00
Movement LOS	C	C	A	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.29	0.29	0.29	0.61	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	7.19	7.19	7.19	15.36	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.10			10.87			4.97			0.00		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	4.10											
Intersection LOS	C											

Table 16- Horizon With Project Manila Rd/I-70 WB Ramp Intersection Operations (AM Peak Hour)

Name	Manila Rd			Manila Rd						Westbound Ramp		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	4.85	4.98	0.00	0.00	2.78	2.96	0.00	0.00	0.00	21.89	21.40	27.31
Movement LOS	A	A			A	A				C	C	C
d_A, Approach Delay [s/veh]	4.96			2.89			0.00			26.28		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	7.01											
Intersection LOS	A											
Intersection V/C	0.470											

Table 17- Horizon With Project Manila Rd/I-70 EB Ramp Intersection Operations (AM Peak Hour)

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	0.00	13.96	10.84	9.16	8.69	0.00	23.87	23.85	11.45	0.00	0.00	0.00
Movement LOS		B	B	A	A		C	C	B			
d_A, Approach Delay [s/veh]	13.64			8.91			23.62			0.00		
Approach LOS	B			A			C			A		
d_I, Intersection Delay [s/veh]	20.68											
Intersection LOS	C											
Intersection V/C	0.488											

Table 17- Horizon With Project Peterson Rd/Access 1 Intersection Operations (AM Peak Hour)

Name	Peterson Rd		Peterson Rd		Access 1	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	7.51	0.00	0.00	0.00	11.42	8.66
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	3.71	3.71	0.00	0.00	1.30	1.30
d_A, Approach Delay [s/veh]	2.55		0.00		8.66	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.61					
Intersection LOS	A					

Table 18- Horizon With Project Peterson Rd/Access 2 Intersection Operations (AM Peak Hour)

Name	Peterson Rd			Access 2		
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	7.48	0.00	0.00	0.00	10.56	8.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.14	0.14	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	3.62	3.62	0.00	0.00	1.27	1.27
d_A, Approach Delay [s/veh]	3.74		0.00		8.58	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.83					
Intersection LOS	A					

Table 19- Horizon With Project 48th Ave/Access 3 Intersection Operations (AM Peak Hour)

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
d_M, Delay for Movement [s/veh]	9.81	10.27	8.37	9.89	10.22	8.32	7.22	0.00	0.00	7.34	0.00	0.00
Movement LOS	A	B	A	A	B	A	A	A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.19	1.19	1.19	0.00	0.00	0.00	0.00	0.00	0.00	4.04	0.00	0.00
d_A, Approach Delay [s/veh]	8.37			9.48			2.41			7.34		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	7.51											
Intersection LOS	A											

Table 20- Horizon With Project Colfax Avenue/South Section West Access Intersection Operations (AM Peak Hour)

Name	South Sec W. Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	15.76	11.34	0.00	0.00	8.56	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	3.71	3.71	0.00	0.00	0.82	0.00
d_A, Approach Delay [s/veh]	15.50		0.00		0.27	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.43					
Intersection LOS	C					

Table 21- Horizon With Project Colfax Avenue/South Section East Access Intersection Operations (AM Peak Hour)

Name	South Sec W. Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.60	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.12	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.60		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Table 22- Horizon With Project Peterson Rd/48th Ave Intersection Operations (AM Peak Hour)

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.88	9.38	8.67	8.56	9.10	8.32	7.22	0.00	0.00	7.25	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.27	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.70	6.70	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.88			8.66			0.00			2.42		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	7.37											
Intersection LOS	A											

Table 23- Horizon With Project Colfax Ave/Manila Rd Intersection Operations (PM Peak Hour)

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	12.66	11.03	11.02	16.65	22.99	22.99	11.39	10.73	10.73	19.40	9.81	8.89
Movement LOS	B	B	B	B	C	C	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	11.11			22.76			10.75			16.50		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	18.75											
Intersection LOS	B											
Intersection V/C	0.505											

Table 24- Horizon With Project Colfax Ave/Peterson Rd Intersection Operations (PM Peak Hour

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.24	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.54	14.51	10.61	16.42	16.38	10.78	7.65	0.00	0.00	8.25	0.00	0.00
Movement LOS	C	B	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	1.33	1.33	1.33	0.15	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	33.34	33.34	33.34	3.64	0.00	0.00	0.08	0.08	0.00
d_A, Approach Delay [s/veh]	14.22			11.38			1.14			0.19		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.36											
Intersection LOS	C											

Table 25- Horizon With Project Manila Rd/I-70 WB Ramp Intersection Operations (PM Peak Hour)

Name	Manila Rd			Manila Rd						Westbound Ramp		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	4.41	2.04	0.00	0.00	2.85	3.90	0.00	0.00	0.00	25.11	23.77	24.48
Movement LOS	A	A			A	A				C	C	C
d_A, Approach Delay [s/veh]	2.55			3.44			0.00			24.81		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	4.62											
Intersection LOS	A											
Intersection V/C	0.334											

Table 26- Horizon With Project Manila Rd/I-70 EB Ramp Intersection Operations (PM Peak Hour)

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
d_M, Delay for Movement [s/veh]	0.00	8.08	7.77	13.78	8.54	0.00	13.60	13.60	13.53	0.00	0.00	0.00
Movement LOS		A	A	B	A		B	B	B			
d_A, Approach Delay [s/veh]	7.99			12.03			13.58			0.00		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	12.08											
Intersection LOS	B											
Intersection V/C	0.280											

Table 27- Horizon With Project Peterson Rd/Access 1 Intersection Operations (PM Peak Hour)

Name	Peterson Rd		Peterson Rd		Access 1	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.10
d_M, Delay for Movement [s/veh]	7.73	0.00	0.00	0.00	10.67	9.73
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.33	0.33
95th-Percentile Queue Length [ft/ln]	0.97	0.97	0.00	0.00	8.25	8.25
d_A, Approach Delay [s/veh]	2.65		0.00		9.73	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.16					
Intersection LOS	A					

Table 28- Horizon With Project Peterson Rd/Access 2 Intersection Operations (PM Peak Hour)

Name	Peterson Rd				Access 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.09
d_M, Delay for Movement [s/veh]	7.54	0.00	0.00	0.00	9.87	9.19
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.29	0.29
95th-Percentile Queue Length [ft/ln]	0.93	0.93	0.00	0.00	7.15	7.15
d_A, Approach Delay [s/veh]	3.77		0.00		9.19	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.42					
Intersection LOS	A					

Table 29- Horizon With Project 48th Ave/Access 3 Intersection Operations (PM Peak Hour)

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
V/C, Movement V/C Ratio	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	9.08	9.58	8.59	9.38	9.30	8.32	7.22	0.00	0.00	7.25	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.12	6.12	6.12	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00
d_A, Approach Delay [s/veh]	8.59			9.00			2.41			7.25		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	8.31											
Intersection LOS	A											

Table 30- Horizon With Project Colfax Avenue/South Section West Access Intersection Operations (PM Peak Hour

Name	South Sec W. Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.25	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	18.07	14.26	0.00	0.00	8.44	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.00	1.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	25.08	25.08	0.00	0.00	0.21	0.00
d_A, Approach Delay [s/veh]	17.87		0.00		0.08	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.07					
Intersection LOS	C					

Table 31- Horizon With Project Colfax Avenue/South Section East Access Intersection Operations (PM Peak Hour)

Name	South Sec W. Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Movement, Approach, & Intersection Results						
V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	11.08	0.00	0.00	8.42	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.63	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.08		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	B					

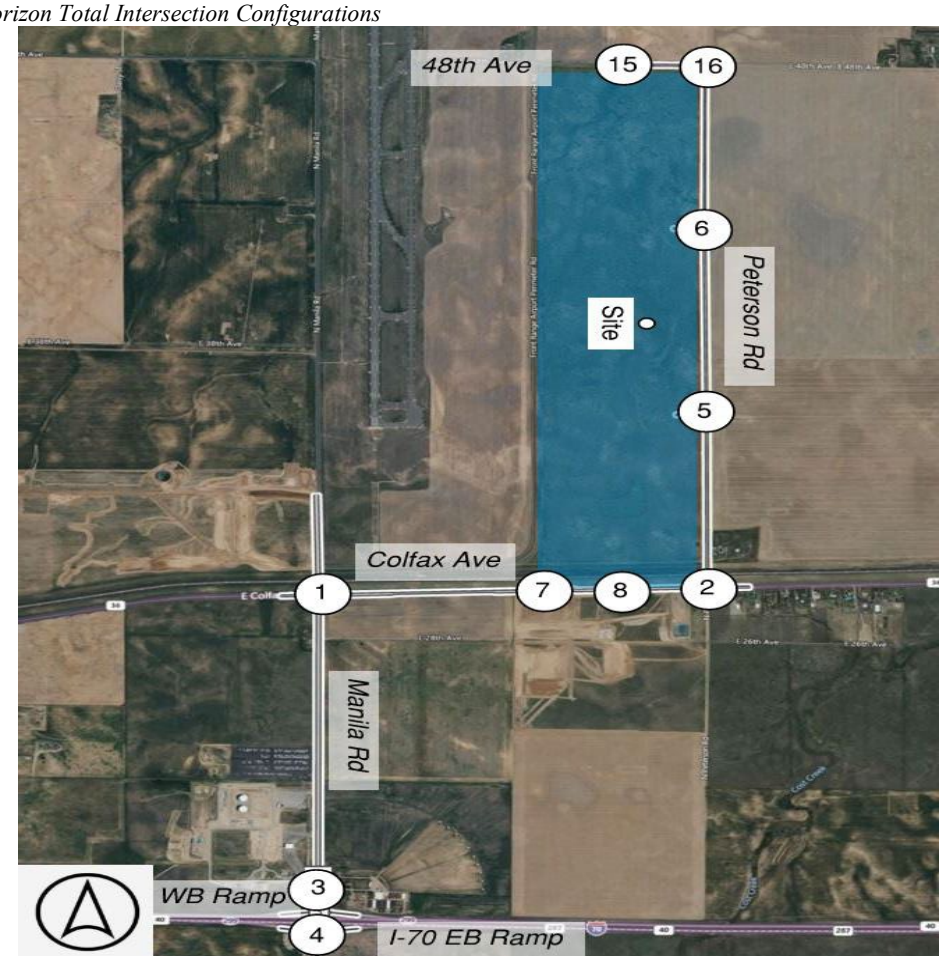
Table 32- Horizon With Project Peterson Rd/48th Ave Intersection Operations (PM Peak Hour)

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Movement, Approach, & Intersection Results												
V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.83	9.32	8.58	8.74	9.45	8.32	7.22	0.00	0.00	7.38	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.83			8.84			0.00			2.46		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.87											
Intersection LOS	A											

All intersections operate at acceptable Level of Service (LOS) with or without the project. Acceptable LOS is defined as LOS D or better. All approaches are also at an acceptable LOS in the entire study area.

Horizon total intersection configurations are shown in Figure 15 and Figure 16. Turn lane requirements are shown in Table 33.

Figure 15 – Horizon Total Intersection Configurations



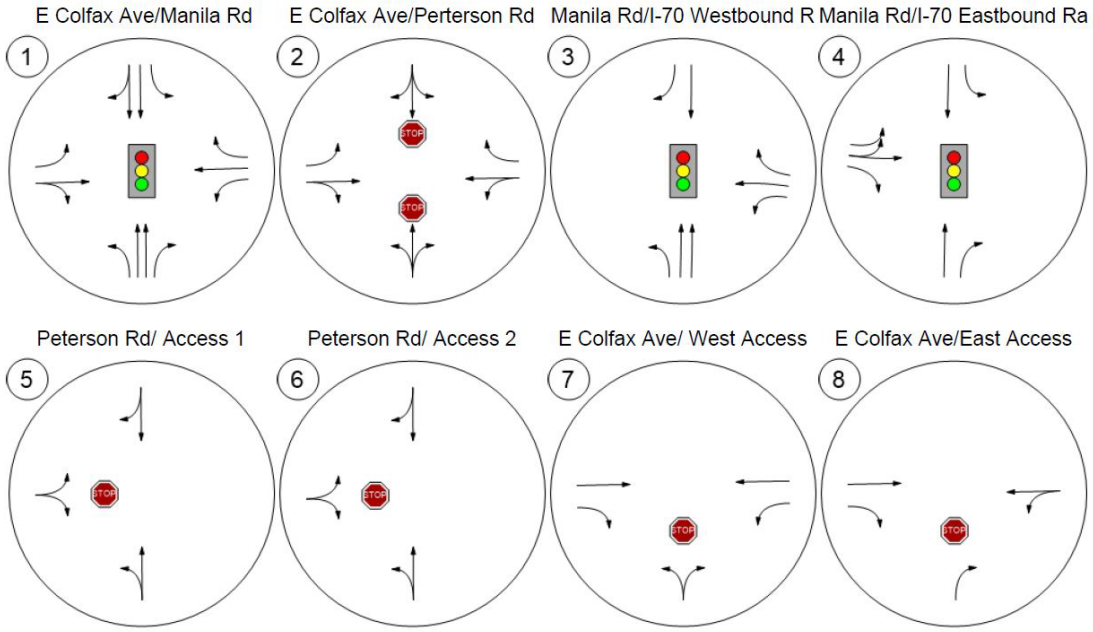
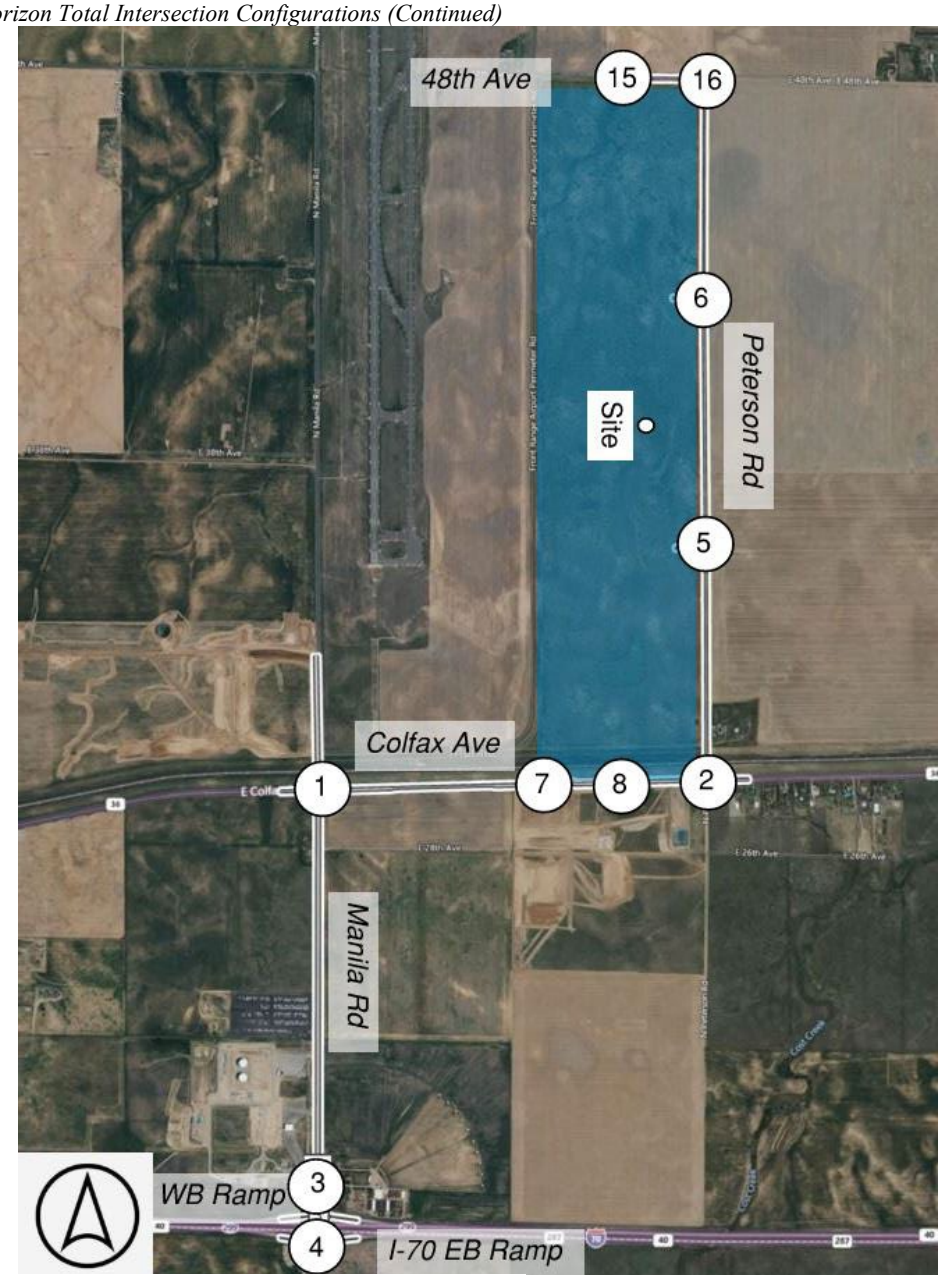
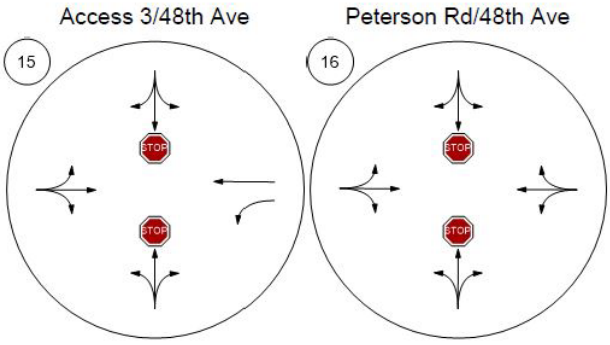


Figure 16 – Horizon Total Intersection Configurations (Continued)





Auxiliary Lane Requirements

The State Highway Access Code (SHAC) was used to determine required turn lanes in the study area. Colfax Avenue is classified as a Rural Highway (R-B) in the SHAC. For this access, a left-turn deceleration lane with taper is required and additional storage length is required for any access with a projected peak hour left ingress turning volumes greater than 10 vehicles-per-hour (vph). The taper lane shall be included within the required deceleration length. Also, a right-turn deceleration lane with taper is required for any access with projected peak hour right ingress turning volumes greater than 25 vph (Taper is included). A right-turn acceleration lane is also required for any access with a projected peak hour right turning volumes greater than 50 vph when the posted speed limit is 45mph or greater. As a result, auxiliary lane requirements at the study area intersections along Colfax Avenue are as follows:

Colfax Avenue/Manila Road

- An eastbound right-turn acceleration lane is required based on the posted speed limit of 55 mph and 215 vph right-turn movement in the PM peak hour. A total of 960-ft acceleration lane is recommended for this movement (740-ft lane plus 220-ft taper)
- A westbound left-turn deceleration lane is required based on 218 vph turning movement. A total of 820-ft deceleration lane is recommended for this movement (220-ft storage lane. 380-ft lane length and 220-ft taper)

Colfax Avenue/Peterson Road

- A 960-ft westbound acceleration lane is recommended based on the 55 mph posted speed limit and 208 vph turning movement. (740-ft lane plus 220-ft taper)
- An eastbound left-turn deceleration lane is recommended based on the 225 vph turning movements. A total of 825-ft auxiliary lane is recommended (225-ft storage, 220-ft taper, and 380-ft lane)
- A 960-ft westbound right-turn deceleration lane is recommended based on the 25 vph turning movement (740-ft lane plus a 220-ft taper)

48th Avenue/Access 3 (Intersection #15)

- A 100-ft westbound left-turn is recommended at this intersection.

Table 33-Rocky Mountain Rail Park Auxiliary Lane Requirements

Intersection	Movement	Type of Speed Change Lane	Length (ft)	When
Colfax Ave/Manila Rd	Eastbound Right-turn	Acceleration Lane	960	Buildout
Colfax Ave/Manila Rd	Westbound Left-turn	Deceleration Lane	820	Buildout
Colfax Ave/Peterson Rd	Westbound Right-turn	Deceleration Lane	600	Buildout
Colfax Ave/Peterson Rd	Eastbound Left-turn	Deceleration Lane	825	Buildout
Colfax Ave/Peterson Rd	Westbound Right-turn	Acceleration Lane	960	Buildout
48th Ave/Access 3 (Int #15)	Westbound Left-turn	Deceleration Lane	100	Buildout

Conclusion and Recommendations

The traffic impact of Rocky Mountain Rail Park North Area on the adjacent network was analyzed in this memo. NEATS (2018), Transport Colorado (2019), and Rocky Mountain Rail Park MTIS (2020) were used to obtain lane configurations, laneage, and background volumes. RMRP North Area trips were then added to the background traffic and results showed all intersections and approaches operate at an acceptable LOS.Turn lane requirement for this project is listed below:

Colfax Avenue and Manila Road

- A 960-ft eastbound right-turn acceleration lane.
- A 820-ft westbound left-turn deceleration lane

Colfax Avenue and Peterson Road

- A 600-ft westbound right-turn deceleration lane

- A 825-ft east-bound left-turn deceleration lane
- A 960-ft westbound right-turn acceleration lane

48th Avenue/ Access 3 (Intersection 15)

- a 100-ft westbound left-turn lane

Please feel free to contact me if you have any questions at Scott.Barnhart@matrixdesigngroup.com or at (719) 575-0100.

Thank you.

Scott D. Barnhart, P.E., PTOE
Executive Associate of Transportation Services

Attachments:

Appendix A – Traffic Counts
Appendix B – Trip Generation Calculations
Appendix C – Horizon Year Conditions Analyses
Appendix D – Transport Colorado Subarea 1 Total Volumes

Appendix A – Traffic Counts

All Traffic Data Services

www.alltrafficdata.net

Date Start: 23-Mar-22
Site Code: 5
Station ID: 5
N MANILA RD N.O. I70 WB RAMPS

Start Time	23-Mar-22 Wed	NB	SB							Total
12:00 AM		9	3							12
01:00		2	4							6
02:00		6	4							10
03:00		9	2							11
04:00		15	5							20
05:00		32	29							61
06:00		**89**	48							**137**
07:00		45	**66**							111
08:00		54	43							97
09:00		38	30							68
10:00		35	45							80
11:00		39	54							93
12:00 PM		36	40							76
01:00		44	38							82
02:00		33	39							72
03:00		42	49							91
04:00		68	**56**							124
05:00		**81**	55							**136**
06:00		53	37							90
07:00		26	16							42
08:00		14	16							30
09:00		7	8							15
10:00		7	10							17
11:00		4	4							8
Total		788	701							1489
Percent		52.9%	47.1%							
AM Peak	-	06:00	07:00	-	-	-	-	-	-	06:00
Vol.	-	89	66	-	-	-	-	-	-	137
PM Peak	-	17:00	16:00	-	-	-	-	-	-	17:00
Vol.	-	81	56	-	-	-	-	-	-	136
Grand Total		788	701							1489
Percent		52.9%	47.1%							
ADT		ADT 1,489		AADT 1,489						

All Traffic Data Services

www.alltrafficdata.net

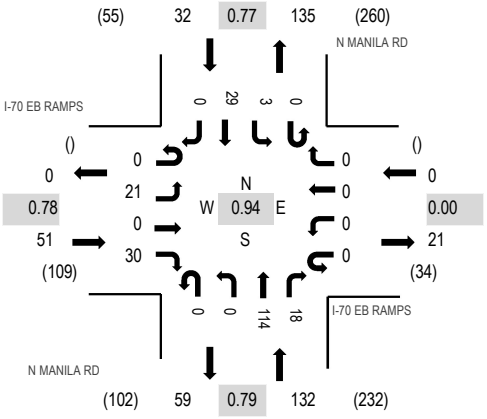
Date Start: 23-Mar-22
Site Code: 6
Station ID: 6
COLFAX AVE E.O. MANILA RD

Start Time	23-Mar-22 Wed	EB	WB							Total
12:00 AM		12	6							18
01:00		9	5							14
02:00		10	8							18
03:00		14	13							27
04:00		19	29							48
05:00		26	70							96
06:00		71	105							176
07:00		**114**	**114**							**228**
08:00		98	96							194
09:00		89	84							173
10:00		93	89							182
11:00		90	85							175
12:00 PM		132	**91**							223
01:00		111	80							191
02:00		116	69							185
03:00		128	79							207
04:00		245	65							310
05:00		**268**	61							**329**
06:00		151	54							205
07:00		68	39							107
08:00		33	30							63
09:00		45	17							62
10:00		21	9							30
11:00		21	3							24
Total		1984	1301							3285
Percent		60.4%	39.6%							
AM Peak	-	07:00	07:00	-	-	-	-	-	-	07:00
Vol.	-	114	114	-	-	-	-	-	-	228
PM Peak	-	17:00	12:00	-	-	-	-	-	-	17:00
Vol.	-	268	91	-	-	-	-	-	-	329
Grand Total		1984	1301							3285
Percent		60.4%	39.6%							
ADT		ADT 3,285		AADT 3,285						

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

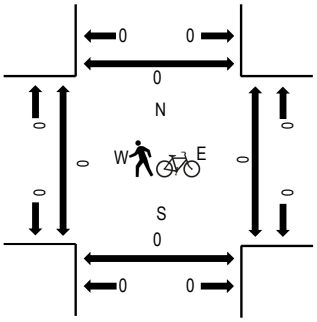
Location: 1 N MANILA RD & I-70 EB RAMPS AM
Date: Wednesday, March 23, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



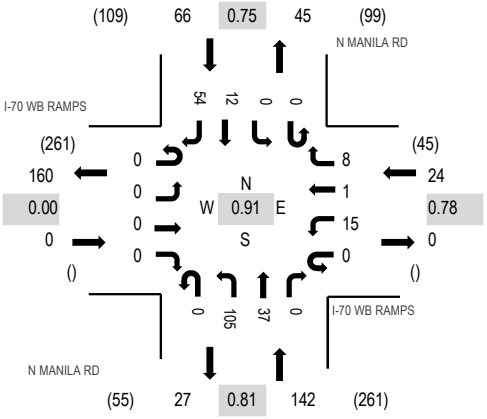
Traffic Counts

Interval Start Time	I-70 EB RAMPS Eastbound				I-70 EB RAMPS Westbound				N MANILA RD Northbound				N MANILA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	6	0	2	0	0	0	0	0	0	27	2	0	0	5	0	42	206	0	0	0	0
7:15 AM	0	4	0	5	0	0	0	0	0	0	40	4	0	0	4	0	57	215	0	0	0	0
7:30 AM	0	4	0	6	0	0	0	0	0	0	32	5	0	1	7	0	55	212	0	0	0	0
7:45 AM	0	4	0	10	0	0	0	0	0	0	23	6	0	2	7	0	52	205	0	0	0	0
8:00 AM	0	9	0	9	0	0	0	0	0	0	19	3	0	0	11	0	51	190	0	0	0	0
8:15 AM	0	12	0	3	0	0	0	0	0	0	29	4	0	1	5	0	54		0	0	0	0
8:30 AM	0	9	0	13	0	0	0	0	0	0	20	2	0	0	4	0	48		1	0	0	0
8:45 AM	0	9	0	4	0	0	0	0	0	0	13	3	0	1	7	0	37		1	0	0	0
Count Total	0	57	0	52	0	0	0	0	0	0	203	29	0	5	50	0	396		2	0	0	0
Peak Hour	0	21	0	30	0	0	0	0	0	0	114	18	0	3	29	0	215		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

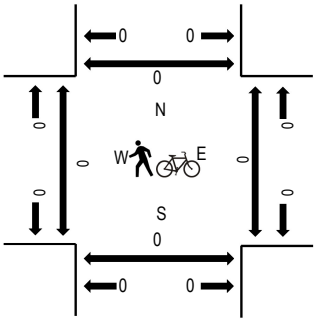
Location: 2 N MANILA RD & I-70 WB RAMPS AM
Date: Wednesday, March 23, 2022
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:15 AM - 07:30 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



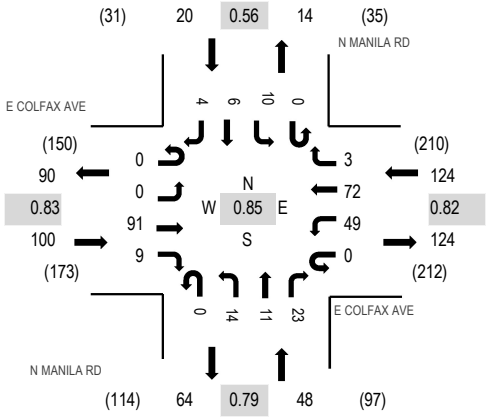
Traffic Counts

Interval Start Time	I-70 WB RAMPS Eastbound				I-70 WB RAMPS Westbound				N MANILA RD Northbound				N MANILA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	0	0	0	3	1	1	0	25	10	0	0	0	2	16	58	232	0	0	0	0
7:15 AM	0	0	0	0	0	3	0	4	0	34	10	0	0	0	1	12	64	224	0	0	0	0
7:30 AM	0	0	0	0	0	3	0	1	0	26	10	0	0	0	5	17	62	215	0	0	0	0
7:45 AM	0	0	0	0	0	6	0	2	0	20	7	0	0	0	4	9	48	198	0	0	0	0
8:00 AM	0	0	0	0	0	4	0	1	0	16	12	0	0	0	6	11	50	183	0	0	0	0
8:15 AM	0	0	0	0	0	3	1	2	0	25	16	0	0	0	3	5	55		0	0	0	0
8:30 AM	0	0	0	0	0	2	1	3	0	18	11	0	0	0	2	8	45		0	0	0	0
8:45 AM	0	0	0	0	0	4	0	0	0	12	9	0	0	0	4	4	33		0	0	0	0
Count Total	0	0	0	0	0	28	3	14	0	176	85	0	0	0	27	82	415		0	0	0	0
Peak Hour	0	0	0	0	0	15	1	8	0	105	37	0	0	0	12	54	232		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

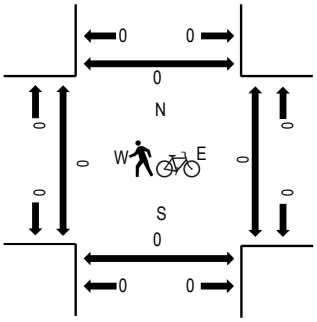
Location: 3 N MANILA RD & E COLFAX AVE AM
Date: Wednesday, March 23, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



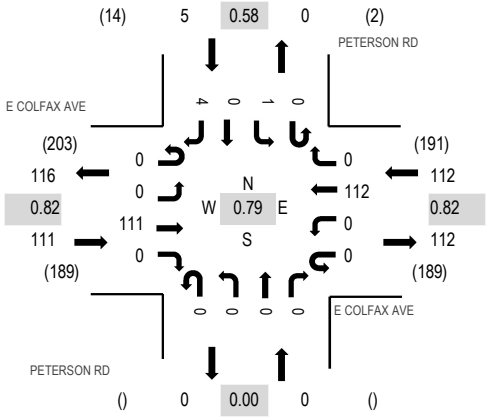
Traffic Counts

Interval Start Time	E COLFAX AVE Eastbound				E COLFAX AVE Westbound				N MANILA RD Northbound				N MANILA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	9	1	0	18	9	1	0	1	2	6	0	0	2	0	49	267	0	0	0	0
7:15 AM	0	0	20	1	0	10	14	1	0	4	2	5	0	3	1	2	63	292	0	0	0	0
7:30 AM	0	0	25	2	0	14	20	0	0	5	1	10	0	3	4	2	86	286	0	0	0	0
7:45 AM	0	0	26	4	0	12	15	0	0	3	2	4	0	3	0	0	69	260	0	0	0	0
8:00 AM	0	0	20	2	0	13	23	2	0	2	6	4	0	1	1	0	74	244	0	0	0	0
8:15 AM	0	1	14	3	0	4	14	1	0	4	3	10	0	0	2	1	57		0	0	0	0
8:30 AM	0	2	18	2	0	7	15	0	0	4	4	4	0	1	3	0	60		0	0	0	0
8:45 AM	0	3	19	1	0	5	11	1	0	1	3	7	0	0	2	0	53		0	0	0	0
Count Total	0	6	151	16	0	83	121	6	0	24	23	50	0	11	15	5	511		0	0	0	0
Peak Hour	0	0	91	9	0	49	72	3	0	14	11	23	0	10	6	4	292		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

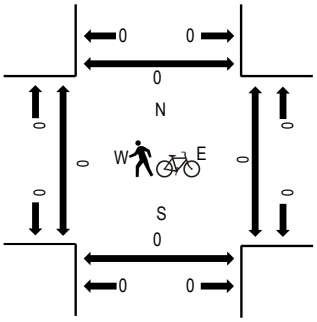
Location: 4 PETERSON RD & E COLFAX AVE AM
Date: Wednesday, March 23, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



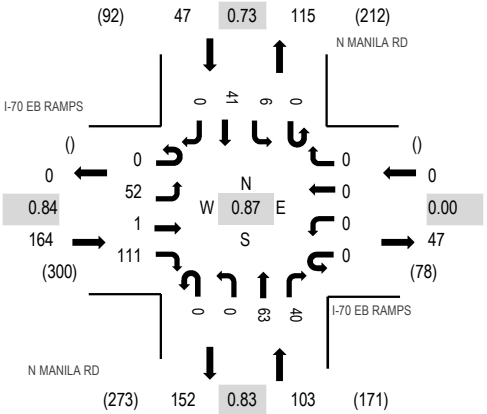
Traffic Counts

Interval Start Time	E COLFAX AVE Eastbound				E COLFAX AVE Westbound				PETERSON RD Northbound				PETERSON RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
7:00 AM	0	0	10	0	0	0	27	0	0	0	0	0	0	0	0	3	40	212	0	0	0	0
7:15 AM	0	0	20	0	0	0	20	0	0	0	0	0	0	0	0	1	41	228	0	0	0	0
7:30 AM	0	0	35	0	0	0	34	0	0	0	0	0	0	1	0	2	72	228	0	0	0	0
7:45 AM	0	0	32	0	0	0	27	0	0	0	0	0	0	0	0	0	59	200	0	0	0	0
8:00 AM	0	0	24	0	0	0	31	0	0	0	0	0	0	0	0	1	56	182	0	0	0	0
8:15 AM	0	0	24	0	0	0	15	0	0	0	0	0	0	0	0	2	41		0	0	0	0
8:30 AM	0	0	21	0	0	0	19	1	0	0	0	0	0	0	0	3	44		0	0	0	0
8:45 AM	0	1	22	0	0	0	17	0	0	0	0	0	0	0	0	1	41		0	0	0	0
Count Total	0	1	188	0	0	0	190	1	0	0	0	0	0	1	0	13	394		0	0	0	0
Peak Hour	0	0	111	0	0	0	112	0	0	0	0	0	0	1	0	4	228		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

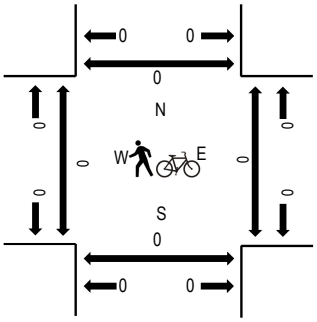
Location: 1 N MANILA RD & I-70 EB RAMPS PM
Date: Wednesday, March 23, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



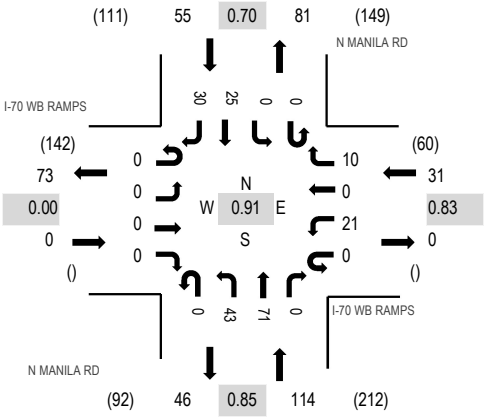
Traffic Counts

Interval Start Time	I-70 EB RAMPS Eastbound				I-70 EB RAMPS Westbound				N MANILA RD Northbound				N MANILA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	7	1	17	0	0	0	0	0	0	12	3	0	4	5	0	49	249	0	0	0	0
4:15 PM	0	10	1	18	0	0	0	0	0	0	17	4	0	0	9	0	59	272	0	0	0	0
4:30 PM	0	11	1	27	0	0	0	0	0	0	11	6	0	2	9	0	67	303	0	0	0	0
4:45 PM	0	19	2	22	0	0	0	0	0	0	10	5	0	2	14	0	74	304	0	0	0	0
5:00 PM	0	12	0	28	0	0	0	0	0	0	18	5	0	0	9	0	72	314	0	0	0	0
5:15 PM	0	17	1	34	0	0	0	0	0	0	17	13	0	3	5	0	90		0	0	0	0
5:30 PM	0	10	0	25	0	0	0	0	0	0	10	9	0	1	13	0	68		0	0	0	0
5:45 PM	0	13	0	24	0	0	0	0	0	0	18	13	0	2	14	0	84		0	0	0	0
Count Total	0	99	6	195	0	0	0	0	0	0	113	58	0	14	78	0	563		0	0	0	0
Peak Hour	0	52	1	111	0	0	0	0	0	0	63	40	0	6	41	0	314		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

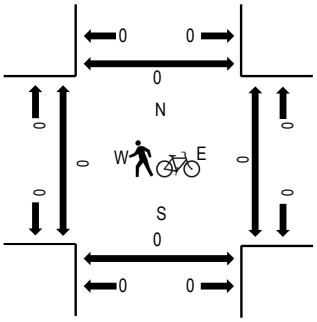
Location: 2 N MANILA RD & I-70 WB RAMPS PM
Date: Wednesday, March 23, 2022
Peak Hour: 05:00 PM - 06:00 PM
Peak 15-Minutes: 05:45 PM - 06:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



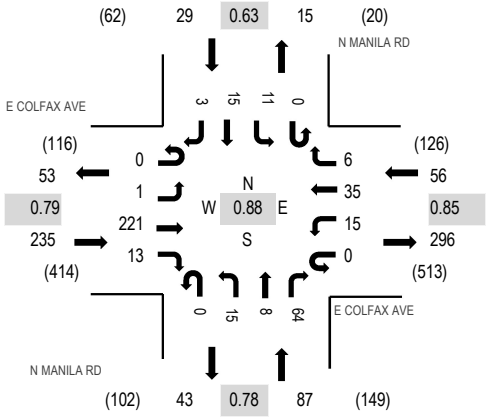
Traffic Counts

Interval Start Time	I-70 WB RAMPS Eastbound				I-70 WB RAMPS Westbound				N MANILA RD Northbound				N MANILA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	0	0	0	4	0	1	0	7	12	0	0	0	6	14	44	183	0	0	0	0
4:15 PM	0	0	0	0	0	5	0	3	0	15	12	0	0	0	4	5	44	188	0	0	0	0
4:30 PM	0	0	0	0	0	4	0	2	0	10	12	0	0	0	6	9	43	197	0	0	0	0
4:45 PM	0	0	0	0	0	8	0	2	0	6	24	0	0	0	9	3	52	197	0	0	0	0
5:00 PM	0	0	0	0	0	6	0	2	0	14	16	0	0	0	2	9	49	200	0	0	0	0
5:15 PM	0	0	0	0	0	2	0	3	0	6	28	0	0	0	7	7	53		0	0	0	0
5:30 PM	0	0	0	0	0	8	0	2	0	9	11	0	0	0	6	7	43		0	0	0	0
5:45 PM	0	0	0	0	0	5	0	3	0	14	16	0	0	0	10	7	55		0	0	0	0
Count Total	0	0	0	0	0	42	0	18	0	81	131	0	0	0	50	61	383		0	0	0	0
Peak Hour	0	0	0	0	0	21	0	10	0	43	71	0	0	0	25	30	200		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

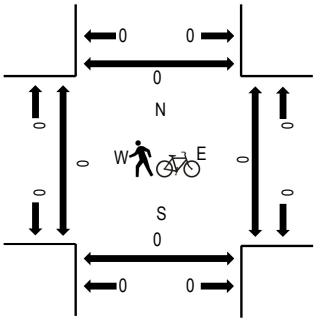
Location: 3 N MANILA RD & E COLFAX AVE PM
Date: Wednesday, March 23, 2022
Peak Hour: 04:45 PM - 05:45 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



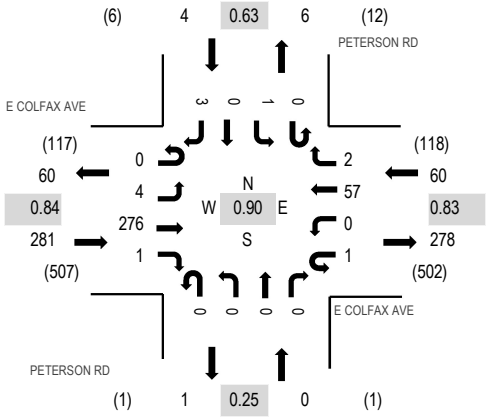
Traffic Counts

Interval Start Time	E COLFAX AVE Eastbound				E COLFAX AVE Westbound				N MANILA RD Northbound				N MANILA RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	32	3	0	5	12	0	0	7	0	9	0	1	9	1	79	367	0	0	0	0
4:15 PM	0	0	41	4	0	5	12	0	0	1	1	11	0	2	3	0	80	377	0	0	0	0
4:30 PM	0	0	45	5	0	8	11	1	0	3	1	10	0	1	4	3	92	405	0	0	0	0
4:45 PM	0	0	71	3	0	3	8	0	0	3	2	21	0	1	4	0	116	407	0	0	0	0
5:00 PM	0	1	41	1	0	5	11	4	0	1	1	17	0	3	3	1	89	384	0	0	0	0
5:15 PM	0	0	56	6	0	4	9	1	0	9	5	14	0	2	2	0	108		0	0	0	0
5:30 PM	0	0	53	3	0	3	7	1	0	2	0	12	0	5	6	2	94		0	0	0	0
5:45 PM	0	0	47	2	0	5	10	1	0	3	1	15	0	3	6	0	93		0	0	0	0
Count Total	0	1	386	27	0	38	80	8	0	29	11	109	0	18	37	7	751		0	0	0	0
Peak Hour	0	1	221	13	0	15	35	6	0	15	8	64	0	11	15	3	407		0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

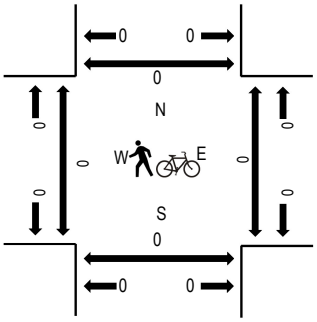
Location: 4 PETERSON RD & E COLFAX AVE PM
Date: Wednesday, March 23, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour - All Vehicles



Note: Total study counts contained in parentheses.

Peak Hour - Pedestrians/Bicycles on Crosswalk



Traffic Counts

Interval Start Time	E COLFAX AVE Eastbound				E COLFAX AVE Westbound				PETERSON RD Northbound				PETERSON RD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
4:00 PM	0	0	46	0	0	0	16	0	0	0	0	0	0	0	0	0	62	307	0	0	0	0
4:15 PM	0	1	52	0	0	0	18	0	0	0	0	1	0	1	0	0	73	326	0	0	0	0
4:30 PM	0	1	53	1	0	0	19	0	0	0	0	0	0	0	0	2	76	345	0	0	0	0
4:45 PM	0	1	85	0	0	0	8	1	0	0	0	0	0	1	0	0	96	343	0	0	0	0
5:00 PM	0	2	58	0	1	0	19	0	0	0	0	0	0	0	0	1	81	325	0	0	0	0
5:15 PM	0	0	80	0	0	0	11	1	0	0	0	0	0	0	0	0	92		0	0	0	0
5:30 PM	0	2	62	0	0	0	9	0	0	0	0	0	0	1	0	0	74		0	0	0	0
5:45 PM	0	2	61	0	0	0	14	1	0	0	0	0	0	0	0	0	78		0	0	0	0
Count Total	0	9	497	1	1	0	114	3	0	0	0	1	0	3	0	3	632		0	0	0	0
Peak Hour	0	4	276	1	1	0	57	2	0	0	0	0	0	1	0	3	345		0	0	0	0

Appendix B – Trip Generation Calculations

PROJECT DETAILS

Project Name:	Rocky Mountain Rail Park	Type of Project:	
Project No:		City:	
Country:		Built-up Area(Sq.ft):	
Analyst Name:	Scott Barnhart	Clients Name:	
Date:	7/24/2022	ZIP/Postal Code:	
State/Province:		No. of Scenarios:	3
Analysis Region:			

SCENARIO SUMMARY

Scenarios	Name	No. of Land Uses	Phases of Development	No. of Years to Project Traffic	User Group	Estimated New Vehicle Trips		
						Entry	Exit	Total
Scenario - 1	Weekday	1	1	0		851	851	1702
Scenario - 2	AM Peak Hour	1	1	0		178	29	207
Scenario - 3	PM Peak Hour	1	1	0		44	176	220

Scenario - 1

Scenario Name: Weekday
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry / Split%	Exit / Split%	Total
130 - Industrial Park	General Urban/Suburban	Employees	415	Weekday	Best Fit (LOG)	851	851	1702
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.68Ln(X) + 3.34	50%	50%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
130 - Industrial Park	100	100	1.4	1.4	50	50

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
130 - Industrial Park	1191	1191	0	0	1191	1191
	2382		0		2382	

INTERNAL VEHICLE TRIP REDUCTION

LAND USE GROUP ASSIGNMENT:

Land Use	Land Use Group
130 - Industrial Park	Others

BALANCED PERSON TRIPS:

INTERNAL PERSON TRIPS:
130 - Industrial Park

Internal Person Trips From	Entry	Exit	Total
Total Internal Person Trips	**0**	**0**	**0**

INTERNAL VEHICLE TRIPS AND CAPTURE:
130 - Industrial Park

Total Internal Person Trips	0	0	0
Vehicle Mode Share	100%	100%	-
Vehicle Occupancy	1.00	1.00	-
Total Vehicle Internal Trips	**0**	**0**	**0**
Total External Vehicle Trips	851	851	1702
Internal Vehicle Trip Capture	**0%**	**0%**	**0%**

PASS-BY VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Pass-by Vehicle Trip %		Pass-by Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
130 - Industrial Park	851	851	0.00%	0.00%	0	0

DIVERTED VEHICLE TRIP REDUCTION

Land Use	External Vehicle Trips		Diverted Vehicle Trip %		Diverted Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
130 - Industrial Park	851	851	0.00%	0.00%	0	0

EXTRA VEHICLE TRIP REDUCTION

Land Use	(External - (Pass-by + Diverted)) Vehicle Trips		Extra Vehicle Trip Reduction %		Extra Reduced Vehicle Trips	
	Entry	Exit	Entry (%)	Exit (%)	Entry	Exit
130 - Industrial Park	851	851	0.00%	0.00%	0	0

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
130 - Industrial Park	851	851	1702

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	851	851	1702
Internal Vehicle Trips	0	0	0
External Vehicle Trips	851	851	1702
Internal Vehicle Trip Capture	0%	0%	0%
Pass-by Vehicle Trips	0	0	0
Diverted Vehicle Trips	0	0	0
Extra Reduced Vehicle Trips	0	0	0
New Vehicle Trips	851	851	1702

Scenario - 2

Scenario Name: AM Peak Hour

User Group:

Dev. phase: 1

No. of Years to Project Traffic : 0

Analyst Note:

Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry / Split%	Exit / Split%	Total
130 - Industrial Park	General Urban/Suburban	Employees	415	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	178	29	207
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.82Ln(X) + 0.39	86%	14%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
130 - Industrial Park	100	100	1	1	86	14

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
130 - Industrial Park	178	29	0	0	178	29
	207		0		207	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
130 - Industrial Park	178	29	207

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	178	29	207
External Vehicle Trips	178	29	207
New Vehicle Trips	178	29	207

Scenario - 3

Scenario Name: PM Peak Hour
User Group:
Dev. phase: 1
No. of Years to Project Traffic : 0
Analyst Note:
Warning:

VEHICLE TRIPS BEFORE REDUCTION

Land Use & Data Source	Location	IV	Size	Time Period	Method / Rate/Equation	Entry / Split%	Exit / Split%	Total
130 - Industrial Park	General Urban/Suburban	Employees	415	Weekday, Peak Hour of Adjacent Street Traffic,	Best Fit (LOG)	44	176	220
Data Source: Trip Generation Manual, 11th Ed					Ln(T) =0.74Ln(X) + 0.93	20%	80%	

VEHICLE TO PERSON TRIP CONVERSION

BASELINE SITE VEHICLE CHARACTERISTICS:

Land Use	Baseline Site Vehicle Mode Share		Baseline Site Vehicle Occupancy		Baseline Site Vehicle Directional Split	
	Entry (%)	Exit (%)	Entry	Exit	Entry (%)	Exit (%)
130 - Industrial Park	100	100	1	1	20	80

ESTIMATED BASELINE SITE PERSON TRIPS:

Land Use	Person Trips by Vehicle		Person Trips by Other Modes		Total Baseline Site Person Trips	
	Entry	Exit	Entry	Exit	Entry	Exit
130 - Industrial Park	44	176	0	0	44	176
	220		0		220	

NEW VEHICLE TRIPS

Land Use	New Vehicle Trips		
	Entry	Exit	Total
130 - Industrial Park	44	176	220

RESULTS

Site Totals	Entry	Exit	Total
Vehicle Trips Before Reduction	44	176	220
External Vehicle Trips	44	176	220
New Vehicle Trips	44	176	220

Appendix C – Horizon Year Conditions Analyses

Intersection Level Of Service Report
Intersection 1: E Colfax Ave/Manila Rd

Control Type:	Signalized	Delay (sec / veh):	13.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.456

Intersection Setup

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	0	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	770.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00
Speed [mph]	45.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Base Volume Input [veh/h]	15	1125	15	9	157	5	5	50	5	40	90	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	8	0	0	3	0	0	3	0	0	19
Total Hourly Volume [veh/h]	15	1125	7	9	157	2	5	50	2	40	90	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	281	2	2	39	1	1	13	1	10	23	5
Total Analysis Volume [veh/h]	15	1125	7	9	157	2	5	50	2	40	90	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	15	44	0	0	29	0	0	16	0	0	16	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	29	29	29	24	24	24	23	23	23	23	23
g / C, Green / Cycle	0.48	0.48	0.48	0.40	0.40	0.40	0.38	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.01	0.40	0.01	0.02	0.05	0.05	0.00	0.04	0.04	0.06	0.01
s, saturation flow rate [veh/h]	1028	2844	1270	397	1494	1487	1026	1484	1080	1494	1270
c, Capacity [veh/h]	637	1384	618	135	599	597	432	564	468	568	483
d1, Uniform Delay [s]	8.03	13.09	7.96	28.45	11.37	11.37	14.59	11.95	14.33	12.27	11.70
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	1.20	0.01	0.21	0.10	0.10	0.05	0.32	0.36	0.60	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.81	0.01	0.07	0.13	0.13	0.01	0.09	0.09	0.16	0.04
d, Delay for Lane Group [s/veh]	8.04	14.29	7.96	28.66	11.47	11.47	14.64	12.27	14.69	12.86	11.86
Lane Group LOS	A	B	A	C	B	B	B	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.08	4.90	0.04	0.12	0.56	0.56	0.04	0.39	0.35	0.70	0.14
50th-Percentile Queue Length [ft/ln]	1.97	122.57	0.91	3.07	13.94	13.93	1.09	9.74	8.71	17.40	3.54
95th-Percentile Queue Length [veh/ln]	0.14	8.53	0.07	0.22	1.00	1.00	0.08	0.70	0.63	1.25	0.26
95th-Percentile Queue Length [ft/ln]	3.54	213.35	1.65	5.53	25.10	25.07	1.97	17.53	15.67	31.32	6.38

Movement, Approach, & Intersection Results

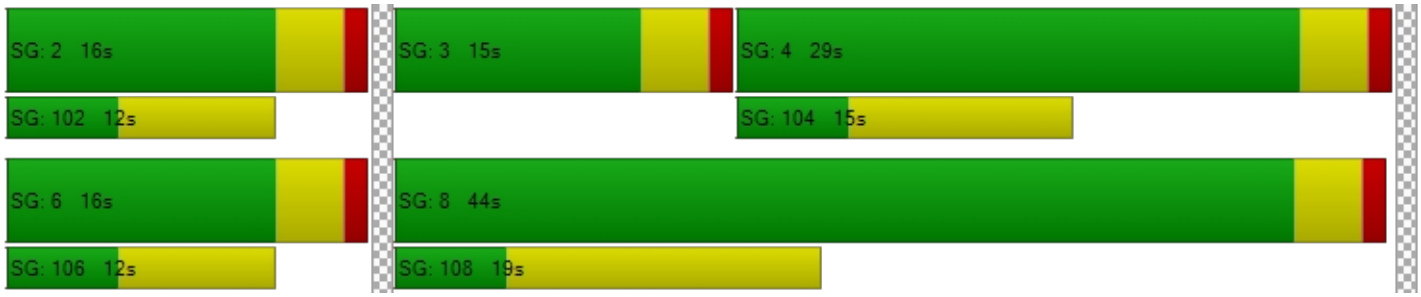
d_M, Delay for Movement [s/veh]	8.04	14.29	7.96	28.66	11.47	11.47	14.64	12.27	12.27	14.69	12.86	11.86
Movement LOS	A	B	A	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	14.17			12.39			12.48			13.23		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.82											
Intersection LOS	B											
Intersection V/C	0.456											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.833	2.684	2.036	2.407
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	833	400	400
d_b, Bicycle Delay [s]	3.34	10.21	19.20	19.20
l_b,int, Bicycle LOS Score for Intersection	2.512	1.701	1.659	1.837
Bicycle LOS	B	A	A	A

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: E Colfax Ave/Peterson Rd

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	685.00	100.00	100.00	100.00	100.00	600.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Base Volume Input [veh/h]	0	0	0	2	0	6	0	150	0	0	152	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	2	0	6	0	150	0	0	152	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	1	0	2	0	38	0	0	38	0
Total Analysis Volume [veh/h]	0	0	0	2	0	6	0	150	0	0	152	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.81	11.12	9.18	10.82	11.17	9.24	7.67	0.00	0.00	7.67	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.03	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.77	0.77	0.77	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.37			9.63			0.00			0.00		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	0.25											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Manila Rd/I-70 Westbound Ramp

Control Type:	Signalized	Delay (sec / veh):	6.5
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.416

Intersection Setup

Name	Manila Rd			Manila Rd						Westbound Ramp		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd						Westbound Ramp		
Base Volume Input [veh/h]	155	927	0	0	58	149	0	0	0	25	5	228
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	2.00	2.00	16.00	16.00	2.00	2.00	2.00	16.00	16.00	16.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	75	0	0	0	0	0	114
Total Hourly Volume [veh/h]	155	927	0	0	58	74	0	0	0	25	5	114
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	232	0	0	15	19	0	0	0	6	1	29
Total Analysis Volume [veh/h]	155	927	0	0	58	74	0	0	0	25	5	114
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	0	0	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	3	0	0	3	0	0	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No						No	
Maximum Recall		No			No						No	
Pedestrian Recall		No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	43	43		9	9	9
g / C, Green / Cycle	0.71	0.71	0.71	0.71		0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.15	0.33	0.04	0.06		0.02	0.00	0.09
s, saturation flow rate [veh/h]	1005	2844	1494	1270		1423	1494	1270
c, Capacity [veh/h]	784	2026	1064	905		220	231	196
d1, Uniform Delay [s]	4.08	3.68	2.58	2.64		21.86	21.55	23.60
k, delay calibration	0.50	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.56	0.75	0.10	0.18		0.23	0.04	2.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.46	0.05	0.08		0.11	0.02	0.58
d, Delay for Lane Group [s/veh]	4.64	4.43	2.68	2.81		22.09	21.59	26.32
Lane Group LOS	A	A	A	A		C	C	C
Critical Lane Group	No	Yes	No	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.50	1.04	0.10	0.14		0.30	0.06	1.56
50th-Percentile Queue Length [ft/ln]	12.54	26.01	2.54	3.49		7.50	1.47	38.90
95th-Percentile Queue Length [veh/ln]	0.90	1.87	0.18	0.25		0.54	0.11	2.80
95th-Percentile Queue Length [ft/ln]	22.56	46.83	4.58	6.27		13.50	2.65	70.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.64	4.43	0.00	0.00	2.68	2.81	0.00	0.00	0.00	22.09	21.59	26.32
Movement LOS	A	A			A	A				C	C	C
d_A, Approach Delay [s/veh]	4.46			2.76			0.00			25.42		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	6.52											
Intersection LOS	A											
Intersection V/C	0.416											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.69	21.69	21.69	21.69
l_p,int, Pedestrian LOS Score for Intersection	2.538	2.716	1.926	2.167
Crosswalk LOS	B	B	A	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1066	1066	0	666
d_b, Bicycle Delay [s]	6.54	6.54	30.02	13.35
l_b,int, Bicycle LOS Score for Intersection	2.452	1.901	4.132	1.985
Bicycle LOS	B	A	D	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Manila Rd/I-70 Eastbound Ramp

Control Type:	Signalized	Delay (sec / veh):	19.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.453

Intersection Setup

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Base Volume Input [veh/h]	0	223	50	35	53	0	859	5	40	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	16.00	16.00	16.00	16.00	2.00	16.00	16.00	16.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	25	0	0	0	0	0	20	0	0	0
Total Hourly Volume [veh/h]	0	223	25	35	53	0	859	5	20	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	56	6	9	13	0	215	1	5	0	0	0
Total Analysis Volume [veh/h]	0	223	25	35	53	0	859	5	20	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	10	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	14	0	9	23	0	0	37	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	4	0	0	4	0	0	15	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No			No				
Maximum Recall		No			No			No				
Pedestrian Recall		No			No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	60	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	27	27	31	31	21	21	21	
g / C, Green / Cycle	0.45	0.45	0.51	0.51	0.35	0.35	0.35	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.02	0.04	0.04	0.30	0.30	0.02	
s, saturation flow rate [veh/h]	1494	1270	939	1494	1423	1424	1270	
c, Capacity [veh/h]	666	566	555	767	503	503	449	
d1, Uniform Delay [s]	10.87	9.43	7.64	7.38	18.05	18.05	12.77	
k, delay calibration	0.50	0.50	0.50	0.50	0.13	0.13	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.36	0.15	0.22	0.17	5.05	5.03	0.04	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.33	0.04	0.06	0.07	0.86	0.86	0.04	
d, Delay for Lane Group [s/veh]	12.22	9.58	7.85	7.56	23.10	23.08	12.81	
Lane Group LOS	B	A	A	A	C	C	B	
Critical Lane Group	Yes	No	No	No	Yes	No	No	
50th-Percentile Queue Length [veh/ln]	1.91	0.18	0.22	0.32	5.62	5.62	0.17	
50th-Percentile Queue Length [ft/ln]	47.86	4.62	5.53	8.11	140.44	140.39	4.15	
95th-Percentile Queue Length [veh/ln]	3.45	0.33	0.40	0.58	9.50	9.50	0.30	
95th-Percentile Queue Length [ft/ln]	86.15	8.32	9.95	14.59	237.62	237.55	7.47	

Movement, Approach, & Intersection Results

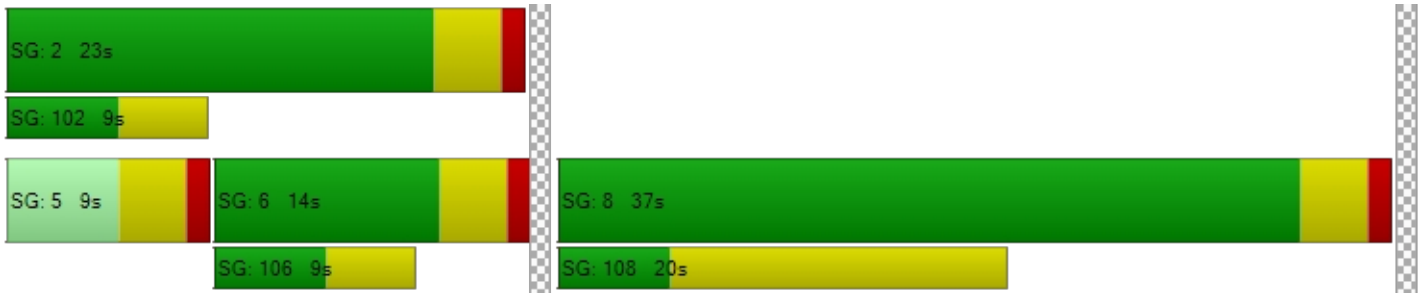
d_M, Delay for Movement [s/veh]	0.00	12.22	9.58	7.85	7.56	0.00	23.09	23.08	12.81	0.00	0.00	0.00
Movement LOS		B	A	A	A		C	C	B			
d_A, Approach Delay [s/veh]	11.95			7.68			22.86			0.00		
Approach LOS	B			A			C			A		
d_I, Intersection Delay [s/veh]	19.55											
Intersection LOS	B											
Intersection V/C	0.453											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	2.237	2.397	2.243	1.516
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	632	1098	0
d_b, Bicycle Delay [s]	20.88	14.05	6.10	30.04
l_b,int, Bicycle LOS Score for Intersection	2.010	1.705	3.051	4.132
Bicycle LOS	B	A	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: E Colfax Ave/ South Sec W.Acc

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name			E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	600.00	390.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name			E Colfax Ave		E Colfax Ave	
Base Volume Input [veh/h]	16	1	149	68	11	287
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	15.00	15.00	15.00	15.00	15.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	1	149	68	11	287
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	37	17	3	72
Total Analysis Volume [veh/h]	16	1	149	68	11	287
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

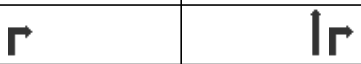
Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	11.97	9.38	0.00	0.00	7.84	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	2.41	2.41	0.00	0.00	0.65	0.00
d_A, Approach Delay [s/veh]	11.81		0.00		0.29	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.54					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: E Colfax Ave/South Section E.Acc

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name			E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	600.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name			E Colfax Ave		E Colfax Ave	
Base Volume Input [veh/h]	0	1	150	34	0	298
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	15.00	15.00	15.00	15.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1	150	34	0	298
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	38	9	0	75
Total Analysis Volume [veh/h]	0	1	150	34	0	298
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	9.17	0.00	0.00	0.00	0.00
Movement LOS		A	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.09	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.17		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.02					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: E Colfax Ave/Manila Rd

Control Type:	Signalized	Delay (sec / veh):	18.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.382

Intersection Setup

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	770.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00
Speed [mph]	45.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Base Volume Input [veh/h]	10	127	50	31	828	5	5	140	25	20	65	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	25	0	0	3	0	0	13	0	0	4
Total Hourly Volume [veh/h]	10	127	25	31	828	2	5	140	12	20	65	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	32	6	8	207	1	1	35	3	5	16	1
Total Analysis Volume [veh/h]	10	127	25	31	828	2	5	140	12	20	65	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	44	0	0	35	0	0	16	0	0	16	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	20	20	20	28	28	28	28	28
g / C, Green / Cycle	0.41	0.41	0.41	0.32	0.32	0.32	0.46	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.02	0.04	0.02	0.03	0.28	0.28	0.00	0.10	0.02	0.04	0.00
s, saturation flow rate [veh/h]	639	2870	1281	995	1507	1506	1073	1487	995	1507	1281
c, Capacity [veh/h]	291	1168	521	386	491	490	549	684	480	694	590
d1, Uniform Delay [s]	12.66	11.07	10.80	16.64	18.89	18.89	10.87	9.76	12.51	9.16	8.79
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.04	0.04	0.09	4.12	4.12	0.03	0.75	0.16	0.27	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.11	0.05	0.08	0.85	0.85	0.01	0.22	0.04	0.09	0.01
d, Delay for Lane Group [s/veh]	12.71	11.12	10.83	16.72	23.01	23.01	10.90	10.51	12.67	9.43	8.81
Lane Group LOS	B	B	B	B	C	C	B	B	B	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.07	0.43	0.17	0.29	4.98	4.97	0.03	0.98	0.16	0.39	0.02
50th-Percentile Queue Length [ft/ln]	1.70	10.73	4.19	7.17	124.41	124.32	0.86	24.57	3.92	9.72	0.58
95th-Percentile Queue Length [veh/ln]	0.12	0.77	0.30	0.52	8.63	8.63	0.06	1.77	0.28	0.70	0.04
95th-Percentile Queue Length [ft/ln]	3.06	19.32	7.55	12.90	215.87	215.74	1.56	44.23	7.05	17.50	1.05

Movement, Approach, & Intersection Results

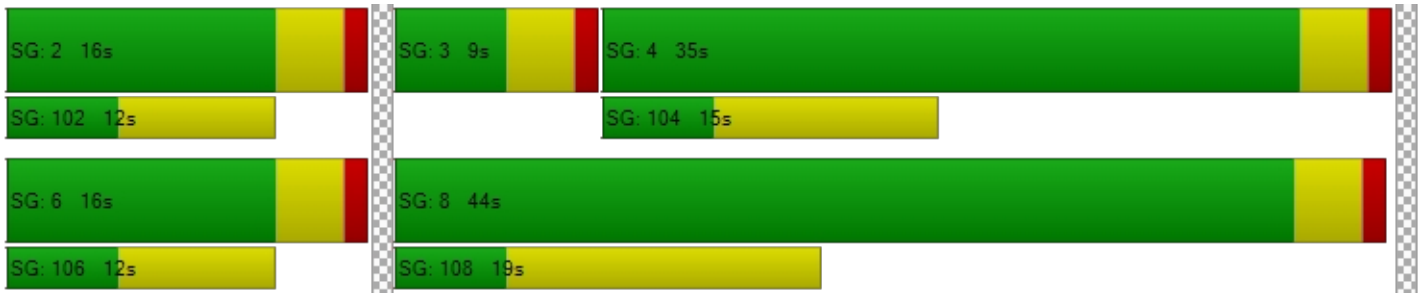
d_M, Delay for Movement [s/veh]	12.71	11.12	10.83	16.72	23.01	23.01	10.90	10.51	10.51	12.67	9.43	8.81
Movement LOS	B	B	B	B	C	C	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	11.17			22.79			10.53			10.13		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	18.90											
Intersection LOS	B											
Intersection V/C	0.382											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	21.72	21.72
I_p,int, Pedestrian LOS Score for Intersection	2.756	2.586	2.093	2.443
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1332	1032	399	399
d_b, Bicycle Delay [s]	3.36	7.04	19.24	19.24
I_b,int, Bicycle LOS Score for Intersection	1.714	2.272	1.840	1.713
Bicycle LOS	A	B	A	A

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: E Colfax Ave/Peterson Rd

Control Type:	Two-way stop	Delay (sec / veh):	12.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	685.00	100.00	100.00	100.00	100.00	600.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Base Volume Input [veh/h]	0	0	0	2	0	5	6	374	2	2	77	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	2	0	5	6	374	2	2	77	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	1	0	1	2	94	1	1	19	1
Total Analysis Volume [veh/h]	0	0	0	2	0	5	6	374	2	2	77	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.56	12.69	10.61	12.55	12.72	8.85	7.52	0.00	0.00	8.25	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.03	0.03	0.03	0.01	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.72	0.72	0.72	0.32	0.00	0.00	0.08	0.08	0.00
d_A, Approach Delay [s/veh]	11.96			9.91			0.12			0.20		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	0.28											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: Manila Rd/I-70 Westbound Ramp

Control Type:	Signalized	Delay (sec / veh):	4.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.274

Intersection Setup

Name	Manila Rd			Manila Rd						Westbound Ramp		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd						Westbound Ramp		
Base Volume Input [veh/h]	55	168	0	0	248	630	0	0	0	40	5	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	15.00	15.00	2.00	2.00	15.00	15.00	2.00	2.00	2.00	15.00	15.00	15.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	315	0	0	0	0	0	17
Total Hourly Volume [veh/h]	55	168	0	0	248	315	0	0	0	40	5	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	42	0	0	62	79	0	0	0	10	1	4
Total Analysis Volume [veh/h]	55	168	0	0	248	315	0	0	0	40	5	17
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	0	0	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	3	0	0	3	0	0	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No						No	
Maximum Recall		No			No						No	
Pedestrian Recall		No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	46	46	46	46		6	6	6
g / C, Green / Cycle	0.76	0.76	0.76	0.76		0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.08	0.06	0.16	0.25		0.03	0.00	0.01
s, saturation flow rate [veh/h]	683	2870	1507	1281		1436	1507	1281
c, Capacity [veh/h]	578	2175	1142	971		157	164	140
d1, Uniform Delay [s]	3.55	1.87	2.11	2.34		24.51	23.90	24.15
k, delay calibration	0.50	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.33	0.07	0.44	0.89		0.85	0.07	0.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.08	0.22	0.32		0.26	0.03	0.12
d, Delay for Lane Group [s/veh]	3.88	1.94	2.55	3.23		25.36	23.98	24.53
Lane Group LOS	A	A	A	A		C	C	C
Critical Lane Group	No	No	No	Yes		Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.17	0.06	0.28	0.43		0.53	0.06	0.22
50th-Percentile Queue Length [ft/ln]	4.18	1.55	6.89	10.81		13.25	1.59	5.53
95th-Percentile Queue Length [veh/ln]	0.30	0.11	0.50	0.78		0.95	0.11	0.40
95th-Percentile Queue Length [ft/ln]	7.53	2.79	12.40	19.45		23.85	2.86	9.96

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	3.88	1.94	0.00	0.00	2.55	3.23	0.00	0.00	0.00	25.36	23.98	24.53
Movement LOS	A	A			A	A				C	C	C
d_A, Approach Delay [s/veh]	2.42			2.93			0.00			25.02		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	4.41											
Intersection LOS	A											
Intersection V/C	0.274											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.299	2.955	2.155	1.971
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1066	1066	0	666
d_b, Bicycle Delay [s]	6.54	6.54	30.01	13.34
l_b,int, Bicycle LOS Score for Intersection	1.744	3.008	4.132	1.690
Bicycle LOS	A	C	D	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Manila Rd/I-70 Eastbound Ramp

Control Type:	Signalized	Delay (sec / veh):	11.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.225

Intersection Setup

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Base Volume Input [veh/h]	0	66	50	175	113	0	152	5	150	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	15.00	15.00	15.00	15.00	2.00	15.00	15.00	15.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	25	0	0	0	0	0	75	0	0	0
Total Hourly Volume [veh/h]	0	66	25	175	113	0	152	5	75	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	17	6	44	28	0	38	1	19	0	0	0
Total Analysis Volume [veh/h]	0	66	25	175	113	0	152	5	75	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	33	0	0	33	0	0	27	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	3	0	0	14	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No			No				
Maximum Recall		No			No			No				
Pedestrian Recall		No			No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	60	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	29	29	29	29	23	23	23	
g / C, Green / Cycle	0.48	0.48	0.48	0.48	0.38	0.38	0.38	
(v / s)_i Volume / Saturation Flow Rate	0.04	0.02	0.17	0.07	0.05	0.05	0.06	
s, saturation flow rate [veh/h]	1507	1281	1052	1507	1436	1440	1281	
c, Capacity [veh/h]	729	619	569	729	550	552	491	
d1, Uniform Delay [s]	8.38	8.17	11.84	8.66	12.07	12.07	12.12	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.25	0.12	1.40	0.45	0.54	0.54	0.66	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.09	0.04	0.31	0.16	0.14	0.14	0.15	
d, Delay for Lane Group [s/veh]	8.62	8.29	13.24	9.11	12.61	12.61	12.78	
Lane Group LOS	A	A	B	A	B	B	B	
Critical Lane Group	No	No	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	0.45	0.17	1.62	0.79	0.70	0.70	0.68	
50th-Percentile Queue Length [ft/ln]	11.13	4.18	40.57	19.78	17.41	17.44	16.97	
95th-Percentile Queue Length [veh/ln]	0.80	0.30	2.92	1.42	1.25	1.26	1.22	
95th-Percentile Queue Length [ft/ln]	20.03	7.52	73.03	35.61	31.33	31.39	30.55	

Movement, Approach, & Intersection Results

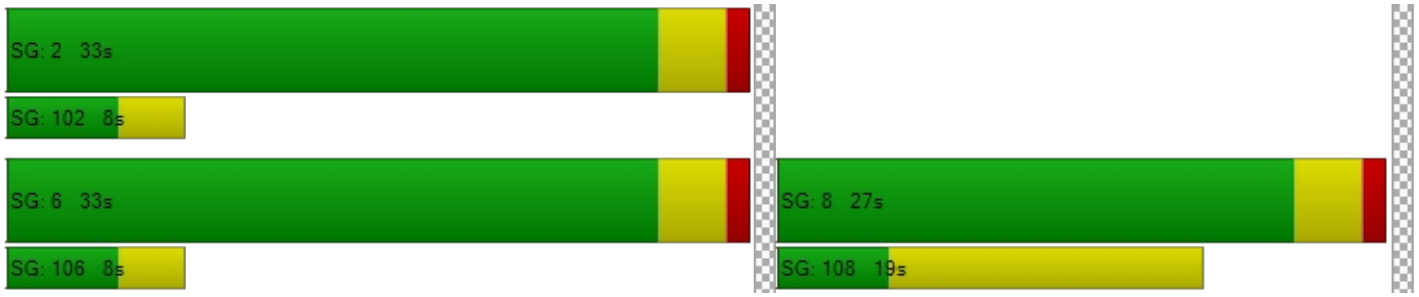
d_M, Delay for Movement [s/veh]	0.00	8.62	8.29	13.24	9.11	0.00	12.61	12.61	12.78	0.00	0.00	0.00
Movement LOS		A	A	B	A		B	B	B			
d_A, Approach Delay [s/veh]	8.53			11.62			12.66			0.00		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	11.56											
Intersection LOS	B											
Intersection V/C	0.225											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.240	2.235	2.127	1.877
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	967	967	767	0
d_b, Bicycle Delay [s]	8.01	8.01	11.41	30.00
l_b,int, Bicycle LOS Score for Intersection	1.751	2.035	2.066	4.132
Bicycle LOS	A	B	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 7: E Colfax Ave/ South Section W.Acc

Control Type:	Two-way stop	Delay (sec / veh):	13.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.172

Intersection Setup

Name	South Sec W.Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	600.00	390.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	South Sec W.Acc		E Colfax Ave		E Colfax Ave	
Base Volume Input [veh/h]	91	5	380	15	3	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	5	380	15	3	79
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	1	95	4	1	20
Total Analysis Volume [veh/h]	91	5	380	15	3	79
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.27	12.12	0.00	0.00	8.31	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.65	0.65	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	16.24	16.24	0.00	0.00	0.21	0.00
d_A, Approach Delay [s/veh]	13.21		0.00		0.30	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	2.26					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 8: E Colfax Ave/South Section E.Acc

Control Type:	Two-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	South Sec E.Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	600.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	South Sec E.Acc		E Colfax Ave		E Colfax Ave	
Base Volume Input [veh/h]	0	5	377	8	0	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	377	8	0	82
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	94	2	0	21
Total Analysis Volume [veh/h]	0	5	377	8	0	82
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.67	0.00	0.00	8.27	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.59	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.67		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: E Colfax Ave/Manila Rd

Control Type:	Signalized	Delay (sec / veh):	13.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.472

Intersection Setup

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	770.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00
Speed [mph]	45.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Base Volume Input [veh/h]	15	1125	15	9	157	5	5	50	5	40	90	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	200	0	0	0	0	25	0	41	5	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	108	0	0	3	0	0	3	0	0	19
Total Hourly Volume [veh/h]	15	1125	107	9	157	2	5	75	2	81	95	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	281	27	2	39	1	1	19	1	20	24	5
Total Analysis Volume [veh/h]	15	1125	107	9	157	2	5	75	2	81	95	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	44	0	0	35	0	0	16	0	0	16	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	30	30	30	25	25	25	22	22	22	22	22
g / C, Green / Cycle	0.50	0.50	0.50	0.41	0.41	0.41	0.37	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.40	0.08	0.02	0.05	0.05	0.00	0.05	0.08	0.06	0.01
s, saturation flow rate [veh/h]	1028	2844	1270	361	1494	1487	1021	1487	1056	1494	1270
c, Capacity [veh/h]	640	1414	631	133	613	610	425	550	445	552	470
d1, Uniform Delay [s]	7.73	12.58	8.31	28.58	11.06	11.06	14.85	12.60	15.62	12.76	12.13
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.01	1.06	0.13	0.21	0.09	0.10	0.05	0.53	0.90	0.68	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.02	0.80	0.17	0.07	0.13	0.13	0.01	0.14	0.18	0.17	0.04
d, Delay for Lane Group [s/veh]	7.75	13.64	8.43	28.79	11.15	11.15	14.90	13.13	16.52	13.43	12.29
Lane Group LOS	A	B	A	C	B	B	B	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.08	4.72	0.59	0.12	0.54	0.54	0.04	0.61	0.77	0.76	0.15
50th-Percentile Queue Length [ft/ln]	1.90	117.94	14.71	3.08	13.60	13.59	1.11	15.19	19.27	19.02	3.65
95th-Percentile Queue Length [veh/ln]	0.14	8.28	1.06	0.22	0.98	0.98	0.08	1.09	1.39	1.37	0.26
95th-Percentile Queue Length [ft/ln]	3.42	206.99	26.47	5.55	24.48	24.46	2.00	27.34	34.69	34.24	6.57

Movement, Approach, & Intersection Results

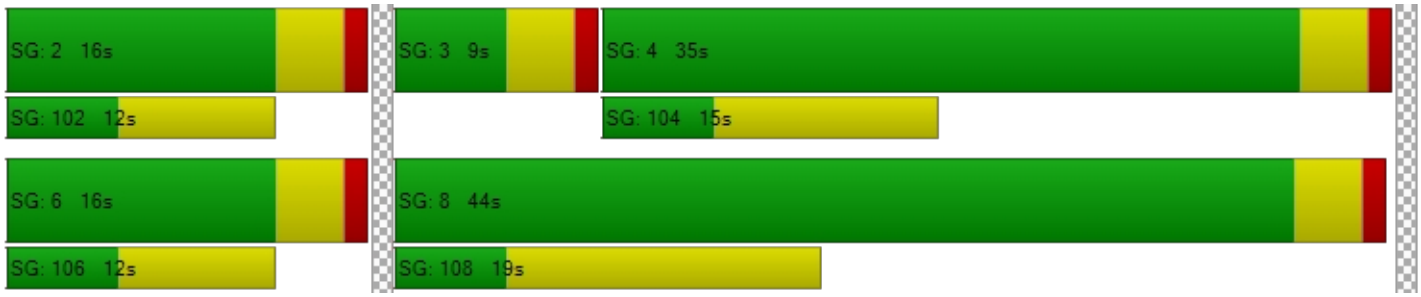
d_M, Delay for Movement [s/veh]	7.75	13.64	8.43	28.79	11.15	11.15	14.90	13.13	13.13	16.52	13.43	12.29
Movement LOS	A	B	A	C	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	13.12			12.10			13.24			14.60		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	13.20											
Intersection LOS	B											
Intersection V/C	0.472											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	21.72	21.72
l_p,int, Pedestrian LOS Score for Intersection	3.092	2.684	2.054	2.504
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1332	1032	399	399
d_b, Bicycle Delay [s]	3.36	7.04	19.24	19.24
l_b,int, Bicycle LOS Score for Intersection	2.677	1.701	1.700	1.913
Bicycle LOS	B	A	A	A

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: E Colfax Ave/Peterson Rd

Control Type:	Two-way stop	Delay (sec / veh):	19.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	685.00	100.00	100.00	100.00	100.00	600.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Base Volume Input [veh/h]	0	0	0	2	0	6	0	150	0	0	152	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	5	0	46	225	0	0	0	0	25
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	7	0	52	225	150	0	0	152	25
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	2	0	13	56	38	0	0	38	6
Total Analysis Volume [veh/h]	0	0	0	7	0	52	225	150	0	0	152	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.03	0.00	0.06	0.17	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	20.21	18.90	9.18	19.53	18.95	9.71	8.29	0.00	0.00	7.67	0.00	0.00
Movement LOS	C	C	A	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.29	0.29	0.29	0.61	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	7.19	7.19	7.19	15.36	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.10			10.87			4.97			0.00		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	4.10											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Manila Rd/I-70 Westbound Ramp

Control Type:	Signalized	Delay (sec / veh):	7.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.470

Intersection Setup

Name	Manila Rd			Manila Rd						Westbound Ramp		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd						Westbound Ramp		
Base Volume Input [veh/h]	155	927	0	0	58	149	0	0	0	25	5	228
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	2.00	2.00	16.00	16.00	2.00	2.00	2.00	16.00	16.00	16.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	117	0	0	10	31	50	0	0	0	0	34
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	90	0	0	0	0	0	131
Total Hourly Volume [veh/h]	155	1044	0	0	68	90	50	0	0	25	5	131
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	261	0	0	17	23	13	0	0	6	1	33
Total Analysis Volume [veh/h]	155	1044	0	0	68	90	50	0	0	25	5	131
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	34	0	0	34	0	0	0	0	0	26	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	4	0	0	13	0	0	0	0	0	16	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No						No	
Maximum Recall		No			No						No	
Pedestrian Recall		No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	43	43	43	43		9	9	9
g / C, Green / Cycle	0.71	0.71	0.71	0.71		0.16	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.16	0.37	0.05	0.07		0.02	0.00	0.10
s, saturation flow rate [veh/h]	981	2844	1494	1270		1423	1494	1270
c, Capacity [veh/h]	762	2016	1059	900		225	236	201
d1, Uniform Delay [s]	4.25	4.02	2.67	2.74		21.67	21.36	23.74
k, delay calibration	0.50	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.60	0.95	0.12	0.22		0.22	0.04	3.57
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.52	0.06	0.10		0.11	0.02	0.65
d, Delay for Lane Group [s/veh]	4.85	4.98	2.78	2.96		21.89	21.40	27.31
Lane Group LOS	A	A	A	A		C	C	C
Critical Lane Group	No	Yes	No	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.53	1.31	0.12	0.18		0.30	0.06	1.83
50th-Percentile Queue Length [ft/ln]	13.16	32.85	3.12	4.46		7.45	1.46	45.79
95th-Percentile Queue Length [veh/ln]	0.95	2.37	0.22	0.32		0.54	0.11	3.30
95th-Percentile Queue Length [ft/ln]	23.70	59.14	5.61	8.03		13.41	2.63	82.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.85	4.98	0.00	0.00	2.78	2.96	0.00	0.00	0.00	21.89	21.40	27.31
Movement LOS	A	A			A	A				C	C	C
d_A, Approach Delay [s/veh]	4.96			2.89			0.00			26.28		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	7.01											
Intersection LOS	A											
Intersection V/C	0.470											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.69	21.69	21.69	21.69
l_p,int, Pedestrian LOS Score for Intersection	2.584	2.808	1.956	2.202
Crosswalk LOS	B	C	A	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	999	999	0	733
d_b, Bicycle Delay [s]	7.51	7.51	30.02	12.05
l_b,int, Bicycle LOS Score for Intersection	2.549	1.969	4.132	2.041
Bicycle LOS	B	A	D	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Manila Rd/I-70 Eastbound Ramp

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.488

Intersection Setup

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Base Volume Input [veh/h]	0	223	50	35	53	0	859	5	40	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	16.00	16.00	16.00	16.00	2.00	16.00	16.00	16.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	10	0	0	101	0	0	0	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	25	0	0	0	0	0	20	0	0	17
Total Hourly Volume [veh/h]	0	223	25	45	53	0	960	5	20	0	0	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	56	6	11	13	0	240	1	5	0	0	4
Total Analysis Volume [veh/h]	0	223	25	45	53	0	960	5	20	0	0	17
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	10	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	14	0	9	23	0	0	37	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	4	0	0	4	0	0	15	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No			No				
Maximum Recall		No			No			No				
Pedestrian Recall		No			No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	60	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	0.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	25	25	29	29	23	23	23	
g / C, Green / Cycle	0.41	0.41	0.48	0.48	0.39	0.39	0.39	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.02	0.05	0.04	0.34	0.34	0.02	
s, saturation flow rate [veh/h]	1494	1270	941	1494	1423	1423	1270	
c, Capacity [veh/h]	613	521	518	715	553	553	494	
d1, Uniform Delay [s]	12.29	10.66	8.83	8.49	17.01	17.01	11.42	
k, delay calibration	0.50	0.50	0.50	0.50	0.17	0.17	0.11	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.67	0.17	0.33	0.20	6.88	6.85	0.03	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.36	0.05	0.09	0.07	0.87	0.87	0.04	
d, Delay for Lane Group [s/veh]	13.96	10.84	9.16	8.69	23.89	23.85	11.45	
Lane Group LOS	B	B	A	A	C	C	B	
Critical Lane Group	Yes	No	No	No	Yes	No	No	
50th-Percentile Queue Length [veh/ln]	2.10	0.20	0.32	0.36	6.41	6.40	0.15	
50th-Percentile Queue Length [ft/ln]	52.54	5.05	7.94	8.99	160.26	160.11	3.84	
95th-Percentile Queue Length [veh/ln]	3.78	0.36	0.57	0.65	10.56	10.55	0.28	
95th-Percentile Queue Length [ft/ln]	94.58	9.09	14.29	16.17	264.07	263.87	6.91	

Movement, Approach, & Intersection Results

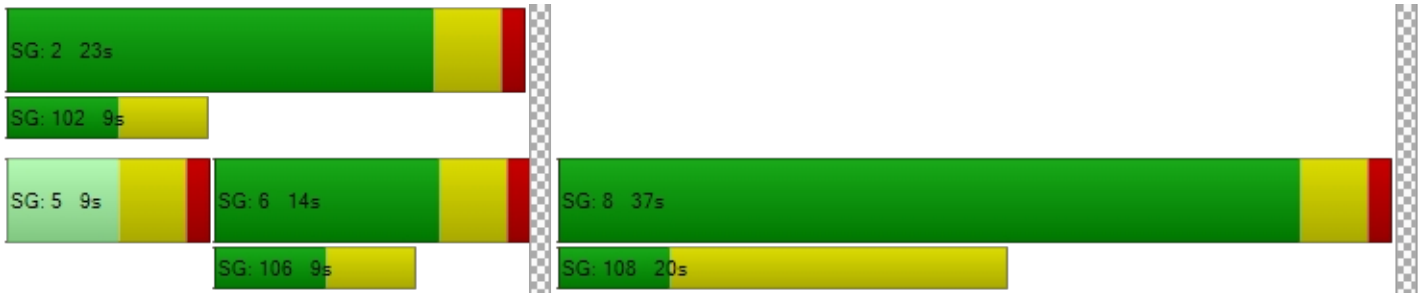
d_M, Delay for Movement [s/veh]	0.00	13.96	10.84	9.16	8.69	0.00	23.87	23.85	11.45	0.00	0.00	0.00
Movement LOS		B	B	A	A		C	C	B			
d_A, Approach Delay [s/veh]	13.64			8.91			23.62			0.00		
Approach LOS	B			A			C			A		
d_I, Intersection Delay [s/veh]	20.68											
Intersection LOS	C											
Intersection V/C	0.488											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	21.72	21.72
I_p,int, Pedestrian LOS Score for Intersection	2.237	2.424	2.276	1.530
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	333	632	1098	0
d_b, Bicycle Delay [s]	20.88	14.05	6.10	30.04
I_b,int, Bicycle LOS Score for Intersection	2.010	1.721	3.218	4.132
Bicycle LOS	B	A	C	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 5: Peterson Rd/ Access 1

Control Type:	Two-way stop	Delay (sec / veh):	8.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Peterson Rd		Peterson Rd		Access 1	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Peterson Rd		Peterson Rd		Access 1	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	85	165	34	0	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	85	165	34	0	0	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	41	9	0	0	4
Total Analysis Volume [veh/h]	85	165	34	0	0	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	7.51	0.00	0.00	0.00	11.42	8.66
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	3.71	3.71	0.00	0.00	1.30	1.30
d_A, Approach Delay [s/veh]	2.55		0.00		8.66	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.61					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 6: Peterson Rd/ Access 2

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Peterson Rd				Access 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Peterson Rd				Access 2	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	83	83	17	0	0	17
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	83	17	0	0	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	21	4	0	0	4
Total Analysis Volume [veh/h]	83	83	17	0	0	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.00	0.02
d_M, Delay for Movement [s/veh]	7.48	0.00	0.00	0.00	10.56	8.58
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.14	0.14	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	3.62	3.62	0.00	0.00	1.27	1.27
d_A, Approach Delay [s/veh]	3.74		0.00		8.58	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.83					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: E Colfax Ave/ South Section West Access

Control Type:	Two-way stop	Delay (sec / veh):	15.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name	South Sec W. Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	600.00	390.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	South Sec W. Acc		E Colfax Ave		E Colfax Ave	
Base Volume Input [veh/h]	16	1	183	68	11	287
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	15.00	15.00	15.00	15.00	15.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	225	0	0	46
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	1	408	68	11	333
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	0	102	17	3	83
Total Analysis Volume [veh/h]	16	1	408	68	11	333
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	15.76	11.34	0.00	0.00	8.56	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.15	0.15	0.00	0.00	0.03	0.00
95th-Percentile Queue Length [ft/ln]	3.71	3.71	0.00	0.00	0.82	0.00
d_A, Approach Delay [s/veh]	15.50		0.00		0.27	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.43					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: E Colfax Ave/South Section East Access

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	South Sec W. Acc		E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	600.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	South Sec W. Acc		E Colfax Ave		E Colfax Ave	
Base Volume Input [veh/h]	0	1	149	34	0	298
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	15.00	15.00	15.00	15.00	15.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	225	0	0	46
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1	374	34	0	344
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	94	9	0	86
Total Analysis Volume [veh/h]	0	1	374	34	0	344
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	10.60	0.00	0.00	0.00	0.00
Movement LOS		B	A	A		A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.12	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.60		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 15: Access 3/48th Ave

Control Type:	Two-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	17	0	0	0	0	0	0	83	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	17	0	0	0	0	0	0	83	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	4	0	0	0	0	0	0	21	0	0
Total Analysis Volume [veh/h]	0	0	17	0	0	0	0	0	0	83	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
d_M, Delay for Movement [s/veh]	9.81	10.27	8.37	9.89	10.22	8.32	7.22	0.00	0.00	7.34	0.00	0.00
Movement LOS	A	B	A	A	B	A	A	A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.19	1.19	1.19	0.00	0.00	0.00	0.00	0.00	0.00	4.04	0.00	0.00
d_A, Approach Delay [s/veh]	8.37			9.48			2.41			7.34		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	7.51											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 16: Peterson Rd/48th Ave

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.082

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	83	0	0	0	0	0	0	0	17	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	0	0	0	0	0	0	0	17	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	0	0	0	0	0	0	0	4	0	0	0
Total Analysis Volume [veh/h]	83	0	0	0	0	0	0	0	17	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.88	9.38	8.67	8.56	9.10	8.32	7.22	0.00	0.00	7.25	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.27	0.27	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.70	6.70	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.88			8.66			0.00			2.42		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	7.37											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 1: E Colfax Ave/Manila Rd

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.505

Intersection Setup

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	770.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00
Speed [mph]	45.00			45.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd			E Colfax Ave			E Colfax Ave		
Base Volume Input [veh/h]	10	127	50	31	828	5	5	140	25	20	65	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	53	0	0	0	0	7	0	198	25	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	52	0	0	3	0	0	13	0	0	4
Total Hourly Volume [veh/h]	10	127	51	31	828	2	5	147	12	218	90	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	32	13	8	207	1	1	37	3	55	23	1
Total Analysis Volume [veh/h]	10	127	51	31	828	2	5	147	12	218	90	4
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	3	8	0	0	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	44	0	0	35	0	0	16	0	0	16	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	14	0	0	10	0	0	7	0	0	7	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	No			No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	24	24	24	20	20	20	28	28	28	28	28
g / C, Green / Cycle	0.41	0.41	0.41	0.33	0.33	0.33	0.46	0.46	0.46	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.02	0.04	0.04	0.03	0.28	0.28	0.00	0.11	0.22	0.06	0.00
s, saturation flow rate [veh/h]	633	2844	1270	964	1494	1493	1040	1474	980	1494	1270
c, Capacity [veh/h]	290	1164	520	380	490	489	522	675	468	684	581
d1, Uniform Delay [s]	12.61	10.99	10.94	16.56	18.82	18.82	11.36	9.91	16.08	9.41	8.87
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.05	0.04	0.08	0.09	4.17	4.17	0.03	0.82	3.31	0.40	0.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.03	0.11	0.10	0.08	0.85	0.85	0.01	0.24	0.47	0.13	0.01
d, Delay for Lane Group [s/veh]	12.66	11.03	11.02	16.65	22.99	22.99	11.39	10.73	19.40	9.81	8.89
Lane Group LOS	B	B	B	B	C	C	B	B	B	A	A
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.07	0.43	0.35	0.29	4.97	4.97	0.04	1.05	2.31	0.55	0.02
50th-Percentile Queue Length [ft/ln]	1.69	10.67	8.69	7.15	124.34	124.25	0.90	26.14	57.84	13.87	0.59
95th-Percentile Queue Length [veh/ln]	0.12	0.77	0.63	0.51	8.63	8.63	0.06	1.88	4.16	1.00	0.04
95th-Percentile Queue Length [ft/ln]	3.04	19.21	15.65	12.87	215.78	215.66	1.62	47.05	104.12	24.97	1.06

Movement, Approach, & Intersection Results

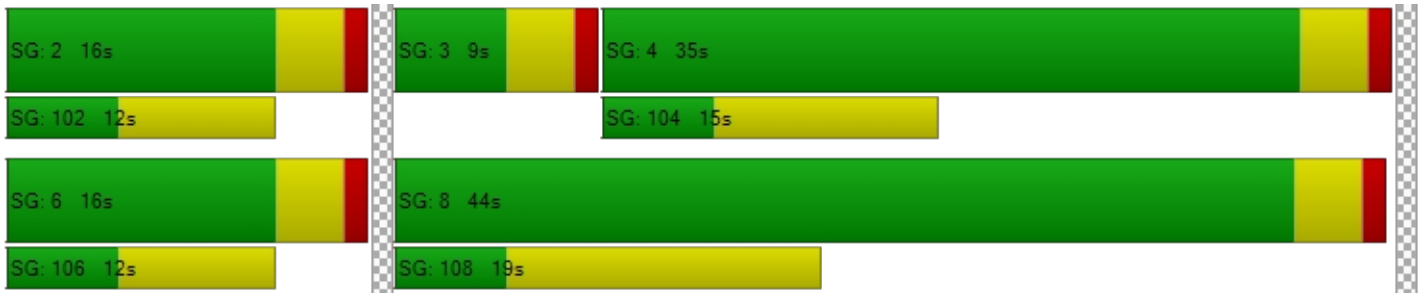
d_M, Delay for Movement [s/veh]	12.66	11.03	11.02	16.65	22.99	22.99	11.39	10.73	10.73	19.40	9.81	8.89
Movement LOS	B	B	B	B	C	C	B	B	B	B	A	A
d_A, Approach Delay [s/veh]	11.11			22.76			10.75			16.50		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	18.75											
Intersection LOS	B											
Intersection V/C	0.505											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.72	21.72	21.72	21.72
I_p,int, Pedestrian LOS Score for Intersection	3.137	2.586	2.113	2.544
Crosswalk LOS	C	B	B	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1332	1032	399	399
d_b, Bicycle Delay [s]	3.36	7.04	19.24	19.24
I_b,int, Bicycle LOS Score for Intersection	1.758	2.272	1.852	2.081
Bicycle LOS	A	B	A	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: E Colfax Ave/Peterson Rd

Control Type:	Two-way stop	Delay (sec / veh):	16.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.071

Intersection Setup

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	685.00	100.00	100.00	100.00	100.00	600.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Peterson Rd			Peterson Rd			E Colfax Ave			E Colfax Ave		
Base Volume Input [veh/h]	0	0	0	2	0	5	6	374	2	2	77	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	25	0	223	60	0	0	0	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	27	0	228	66	374	2	2	77	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	7	0	57	17	94	1	1	19	3
Total Analysis Volume [veh/h]	0	0	0	27	0	228	66	374	2	2	77	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.24	0.05	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	17.54	14.51	10.61	16.42	16.38	10.78	7.65	0.00	0.00	8.25	0.00	0.00
Movement LOS	C	B	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	1.33	1.33	1.33	0.15	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	33.34	33.34	33.34	3.64	0.00	0.00	0.08	0.08	0.00
d_A, Approach Delay [s/veh]	14.22			11.38			1.14			0.19		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	4.36											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: Manila Rd/I-70 Westbound Ramp

Control Type:	Signalized	Delay (sec / veh):	4.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.334

Intersection Setup

Name	Manila Rd			Manila Rd						Westbound Ramp		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd						Westbound Ramp		
Base Volume Input [veh/h]	55	168	0	0	248	630	0	0	0	40	5	34
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	2.00	2.00	16.00	16.00	2.00	2.00	2.00	16.00	16.00	16.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	31	0	0	50	148	13	0	0	0	0	9
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	389	0	0	0	0	0	22
Total Hourly Volume [veh/h]	55	199	0	0	298	389	13	0	0	40	5	21
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	50	0	0	75	97	3	0	0	10	1	5
Total Analysis Volume [veh/h]	55	199	0	0	298	389	13	0	0	40	5	21
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	0	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	0	0	0	10	0
Maximum Green [s]	0	30	0	0	30	0	0	0	0	0	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	36	0	0	36	0	0	0	0	0	24	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	3	0	0	3	0	0	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No						No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
Minimum Recall		No			No						No	
Maximum Recall		No			No						No	
Pedestrian Recall		No			No						No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R		L	C	R
C, Cycle Length [s]	60	60	60	60		60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	45	45	45	45		7	7	7
g / C, Green / Cycle	0.75	0.75	0.75	0.75		0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.09	0.07	0.20	0.31		0.03	0.00	0.02
s, saturation flow rate [veh/h]	603	2844	1494	1270		1423	1494	1270
c, Capacity [veh/h]	513	2144	1126	957		161	169	143
d1, Uniform Delay [s]	3.99	1.96	2.27	2.62		24.31	23.70	24.02
k, delay calibration	0.50	0.50	0.50	0.50		0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	0.09	0.57	1.28		0.80	0.07	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.11	0.09	0.26	0.41		0.25	0.03	0.15
d, Delay for Lane Group [s/veh]	4.41	2.04	2.85	3.90		25.11	23.77	24.48
Lane Group LOS	A	A	A	A		C	C	C
Critical Lane Group	No	No	No	Yes		Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.19	0.08	0.38	0.64		0.53	0.06	0.27
50th-Percentile Queue Length [ft/ln]	4.85	2.04	9.38	15.88		13.16	1.58	6.83
95th-Percentile Queue Length [veh/ln]	0.35	0.15	0.68	1.14		0.95	0.11	0.49
95th-Percentile Queue Length [ft/ln]	8.74	3.68	16.88	28.58		23.68	2.84	12.29

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	4.41	2.04	0.00	0.00	2.85	3.90	0.00	0.00	0.00	25.11	23.77	24.48
Movement LOS	A	A			A	A				C	C	C
d_A, Approach Delay [s/veh]	2.55			3.44			0.00			24.81		
Approach LOS	A			A			A			C		
d_I, Intersection Delay [s/veh]	4.62											
Intersection LOS	A											
Intersection V/C	0.334											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.328	3.147	2.299	1.981
Crosswalk LOS	B	C	B	A
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1066	1066	0	666
d_b, Bicycle Delay [s]	6.54	6.54	30.01	13.34
l_b,int, Bicycle LOS Score for Intersection	1.769	3.335	4.132	1.705
Bicycle LOS	A	C	D	A

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Manila Rd/I-70 Eastbound Ramp

Control Type:	Signalized	Delay (sec / veh):	12.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.280

Intersection Setup

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Manila Rd			Manila Rd			Eastbound Ramp					
Base Volume Input [veh/h]	0	66	50	175	113	0	152	5	150	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	16.00	16.00	16.00	16.00	2.00	16.00	16.00	16.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	50	0	0	27	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	25	0	0	0	0	0	75	0	0	4
Total Hourly Volume [veh/h]	0	66	25	225	113	0	179	5	75	0	0	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	17	6	56	28	0	45	1	19	0	0	1
Total Analysis Volume [veh/h]	0	66	25	225	113	0	179	5	75	0	0	4
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street [	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor stree	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street [	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	0	6	0	0	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	34	0	0	34	0	0	26	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	3	0	0	3	0	0	14	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Minimum Recall		No			No			No				
Maximum Recall		No			No			No				
Pedestrian Recall		No			No			No				
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R	
C, Cycle Length [s]	60	60	60	60	60	60	60	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	2.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	30	30	30	30	22	22	22	
g / C, Green / Cycle	0.50	0.50	0.50	0.50	0.37	0.37	0.37	
(v / s)_i Volume / Saturation Flow Rate	0.04	0.02	0.22	0.08	0.06	0.06	0.06	
s, saturation flow rate [veh/h]	1494	1270	1043	1494	1423	1426	1270	
c, Capacity [veh/h]	747	635	583	747	522	523	466	
d1, Uniform Delay [s]	7.85	7.65	11.84	8.11	12.86	12.86	12.79	
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.23	0.12	1.93	0.43	0.74	0.73	0.74	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.09	0.04	0.39	0.15	0.18	0.18	0.16	
d, Delay for Lane Group [s/veh]	8.08	7.77	13.78	8.54	13.60	13.60	13.53	
Lane Group LOS	A	A	B	A	B	B	B	
Critical Lane Group	No	No	Yes	No	Yes	No	No	
50th-Percentile Queue Length [veh/ln]	0.42	0.16	2.15	0.76	0.86	0.86	0.71	
50th-Percentile Queue Length [ft/ln]	10.62	3.99	53.65	18.88	21.51	21.55	17.68	
95th-Percentile Queue Length [veh/ln]	0.76	0.29	3.86	1.36	1.55	1.55	1.27	
95th-Percentile Queue Length [ft/ln]	19.11	7.18	96.56	33.98	38.72	38.79	31.83	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	8.08	7.77	13.78	8.54	0.00	13.60	13.60	13.53	0.00	0.00	0.00
Movement LOS		A	A	B	A		B	B	B			
d_A, Approach Delay [s/veh]	7.99			12.03			13.58			0.00		
Approach LOS	A			B			B			A		
d_I, Intersection Delay [s/veh]	12.08											
Intersection LOS	B											
Intersection V/C	0.280											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersection	2.240	2.254	2.136	1.997
Crosswalk LOS	B	B	B	A
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1000	1000	733	0
d_b, Bicycle Delay [s]	7.50	7.50	12.03	30.00
l_b,int, Bicycle LOS Score for Intersection	1.751	2.117	2.111	4.132
Bicycle LOS	A	B	B	D

Sequence

Ring 1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 5: Peterson Rd/ Access 1

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.099

Intersection Setup

Name	Peterson Rd		Peterson Rd		Access 1	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Peterson Rd		Peterson Rd		Access 1	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	44	164	0	0	84
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	23	44	164	0	0	84
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	11	41	0	0	21
Total Analysis Volume [veh/h]	23	44	164	0	0	84
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.10
d_M, Delay for Movement [s/veh]	7.73	0.00	0.00	0.00	10.67	9.73
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.33	0.33
95th-Percentile Queue Length [ft/ln]	0.97	0.97	0.00	0.00	8.25	8.25
d_A, Approach Delay [s/veh]	2.65		0.00		9.73	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	3.16					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 6: Peterson Rd/ Access 2

Control Type:	Two-way stop	Delay (sec / veh):	9.2
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.087

Intersection Setup

Name	Peterson Rd				Access 2	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Peterson Rd				Access 2	
Base Volume Input [veh/h]	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	22	82	0	0	82
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	22	82	0	0	82
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	6	21	0	0	21
Total Analysis Volume [veh/h]	22	22	82	0	0	82
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.09
d_M, Delay for Movement [s/veh]	7.54	0.00	0.00	0.00	9.87	9.19
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.29	0.29
95th-Percentile Queue Length [ft/ln]	0.93	0.93	0.00	0.00	7.15	7.15
d_A, Approach Delay [s/veh]	3.77		0.00		9.19	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	4.42					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 7: E Colfax Ave/ West Access

Control Type:	Two-way stop	Delay (sec / veh):	18.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.248

Intersection Setup

Name			E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	600.00	390.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name			E Colfax Ave		E Colfax Ave	
Base Volume Input [veh/h]	91	5	364	15	3	79
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	16.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	60	0	0	223
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	5	424	15	3	302
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	1	106	4	1	76
Total Analysis Volume [veh/h]	91	5	424	15	3	302
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.25	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	18.07	14.26	0.00	0.00	8.44	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.00	1.00	0.00	0.00	0.01	0.00
95th-Percentile Queue Length [ft/ln]	25.08	25.08	0.00	0.00	0.21	0.00
d_A, Approach Delay [s/veh]	17.87		0.00		0.08	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	2.07					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: E Colfax Ave/East Access

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name			E Colfax Ave		E Colfax Ave	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	600.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		55.00		55.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name			E Colfax Ave		E Colfax Ave	
Base Volume Input [veh/h]	0	5	369	8	0	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	16.00	16.00	16.00	16.00	16.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	60	0	0	223
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	5	429	8	0	305
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	107	2	0	76
Total Analysis Volume [veh/h]	0	5	429	8	0	305
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	11.08	0.00	0.00	8.42	0.00
Movement LOS		B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.63	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.08		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 15: Access 3/48th Ave

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.076

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	82	0	0	0	0	0	0	22	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	82	0	0	0	0	0	0	22	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	21	0	0	0	0	0	0	6	0	0
Total Analysis Volume [veh/h]	0	0	82	0	0	0	0	0	0	22	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	9.08	9.58	8.59	9.38	9.30	8.32	7.22	0.00	0.00	7.25	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	
95th-Percentile Queue Length [veh/ln]	0.24	0.24	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
95th-Percentile Queue Length [ft/ln]	6.12	6.12	6.12	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	0.00
d_A, Approach Delay [s/veh]	8.59			9.00			2.41			7.25		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	8.31											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 16: Peterson Rd/48th Ave

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.023

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	22	0	0	0	0	0	0	0	82	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	0	0	0	0	0	0	0	82	0	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	0	0	0	0	0	0	21	0	0	0
Total Analysis Volume [veh/h]	22	0	0	0	0	0	0	0	82	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

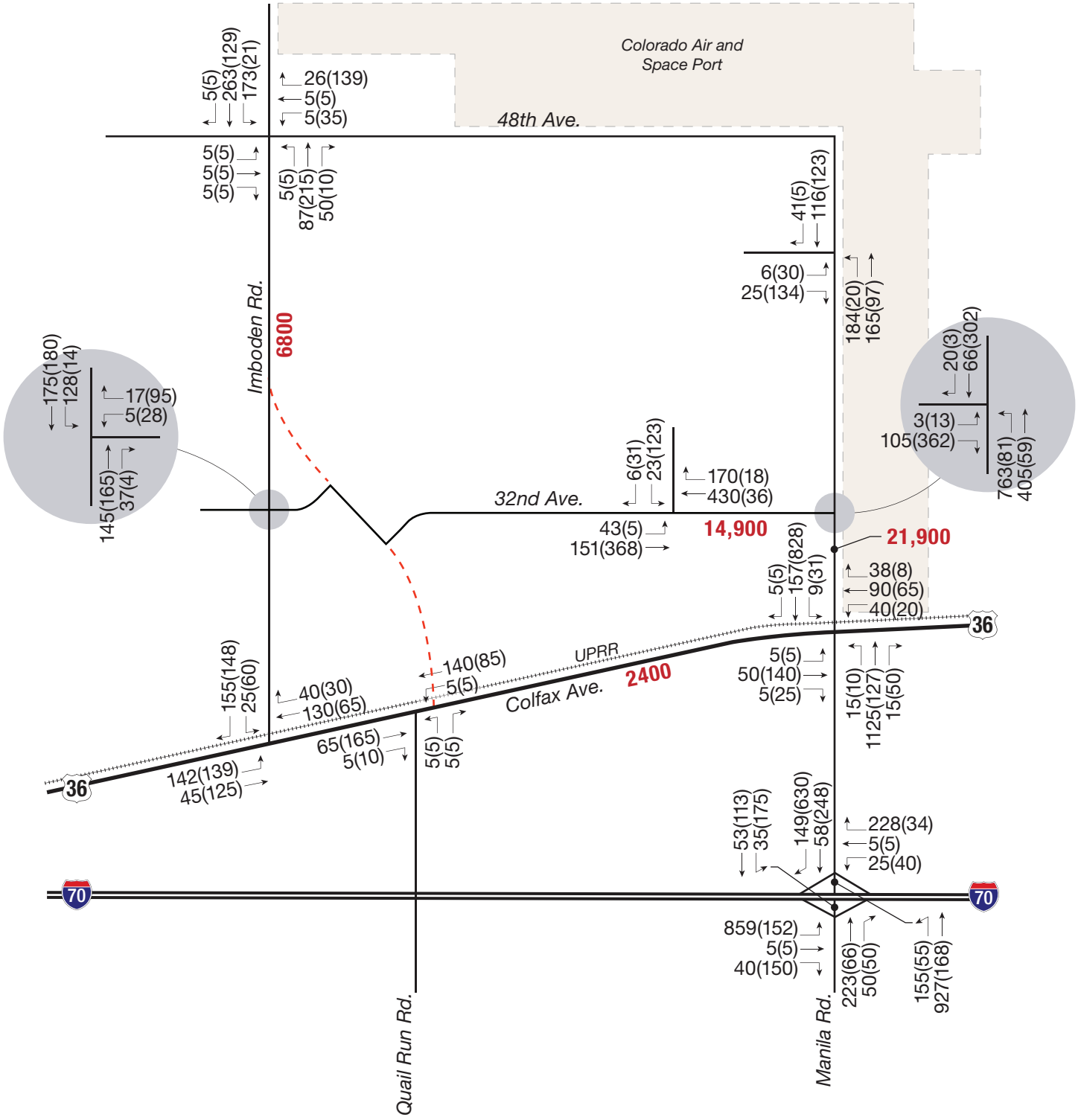
Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.83	9.32	8.58	8.74	9.45	8.32	7.22	0.00	0.00	7.38	0.00	0.00
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.75	1.75	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	8.83			8.84			0.00			2.46		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	1.87											
Intersection LOS	A											

Appendix D – Colorado Transport Subarea A Total Volumes



LEGEND

XXX(XXX)	=	AM(PM) Peak Hour Traffic Volumes
XXXX	=	Daily Traffic Volumes
- - - - -	=	Future Imboden Road/Quail Run Road Alignment

NORTH

FELSBURG HOLT & ULLEVIG

FIGURE 19

Subarea 1 Total Traffic Volumes

TransPort Colorado 18-335 11/11/19