TRANSPORTATION IMPACT STUDY FOR

DRI #4367
981 HOWELL MILL
MIXED-USE DEVELOPMENT

DATE:
June 6, 2025

LOCATION:
Atlanta, Fulton County, Georgia

PREPARED FOR:
981 Howell Mill Road, LLC
1055 Howell Mill Road
Level 8
Atlanta, GA 30318

PREPARED BY:
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A. Executive Summary

A new mixed-use residential development is proposed for construction at 981 Howell Mill Road in Atlanta, Georgia (see Appendix A for the site plan detail). The proposed development will consist of 697 high-rise apartments, 54,380 square feet of commercial space, and a 330-room hotel (130 rooms of which will be set apart for short term rentals). The development is expected to be built out by 2030 and will generate a total of 7,212 new daily trips. Of these daily volumes, 325 new AM peak hour trips (155 entering and 170 exiting) and 510 new PM peak hour trips (264 entering and 246 exiting) are expected to occur.

The proposed development will be constructed as three (3) buildings with parking decks below. Building 1 will have its own parking deck and includes 334 residential units, 100 hotel rooms, and 25,345 square feet of retail space. Building 2 will consist of the remaining 363 residential units, 30 hotel rooms, and 29,035 square feet of retail space. Building 2 will share a parking deck with Building 3 which will contain the remaining 200 hotel rooms.

The two parking decks will have a total of three (3) access points as follows:

- Building 1 will have a parking deck with one (1) full-access point onto Edgehill Avenue.
- Buildings 2 and 3 will have a shared parking deck with one (1) full-access point onto Watkins Street.
- Building 3 will have a driveway for hotel pickup/drop-off as well as delivery vehicles.

Existing intersections adjacent to the planned development, in addition to the three access points, were evaluated to determine if new roadway geometries or traffic controls will be needed at full build-out. The following intersections were evaluated:

1. Howell Mill Rd & 8th St
2. Howell Mill Rd & 10th St
3. 10th St & Watkins St
4. 10th St & Northside Dr
5. 10th St & Hemphill Ave
6. Howell Mill Rd & Edgehill Ave
7. Edgehill Ave & Bellingrath Ave
8. Edgehill Ave & Watkins St
9. Howell Mill Rd & 11th St
10. 11th St & Bellingrath Ave
11. Northside Dr & 11th St
12. Howell Mill Rd & 14th St
13. Northside Dr & 14th St
14. 14th St & Hemphill Ave
15. Northside Dr & Hemphill Ave
16. Howell Mill Rd & Huff Rd
17. Howell Mill Rd & 17th St

In Existing Conditions, there are several intersections that operate at unsatisfactory levels of service (LOS) during the peak periods, particularly the side street approaches at the signalized intersections

along Howell Mill Road and Northside Drive. The City of Atlanta is currently working to add bike lanes and upgrade the intersections along Howell Mill Road, and to add bike lanes and change the intersection operation at Northside Drive with 10th Street. The Georgia Department of Transportation (GDOT) also has plans to add bike lanes along 14th Street, east of Northside Drive, which is expected to impact intersection operations. The only intersection that is currently operating with poor side-street LOS, and is not affected by future planned changes, is the intersection of Northside Drive and 11th Street. The 11th Street approaches operate at LOS E during the AM peak period and LOS F during the PM peak period due to signal timings needing to favor the much higher volume Northside Drive approaches. The only reasonable improvement to reduce delay along the side streets is to lower the cycle length of the signal, though the westbound approach would still operate at LOS E since the volume of traffic is very low at this approach. The eastbound approach would also benefit from having a protected/permissive left-turn phase, which appears to be warranted with 92 vehicles making a left-turn at the intersection during the PM peak period.

In No-Build Conditions, many of the issues at the side street approaches along Howell Mill Road and Northside Drive are expected to continue even after the planned improvements to the roadway. Additionally, the planned changes to 14th Street are expected to have a very negative impact on traffic operations at the intersection of Northside Drive, 14th Street, and Hemphill Avenue. It is expected that the reduction and restriction of lanes along 14th Street will result in high delays on the eastbound and westbound approaches, and southbound delays along Northside Drive since more time will be needed to attempt to clear 14th Street.

In Build Conditions, the addition of project traffic is expected to have minor impacts on future traffic operations at the study intersections, with only slight increases in delay. The intersections already experiencing high side-street delay are expected to continue to operate similarly to No-Build conditions if no improvements are made to mitigate the delay seen in Existing and No-Build conditions.

Table A provides a comparison of each scenario (Existing, No-Build, and Build conditions) and identifies when mitigation is likely to be needed and the how each scenario is expected to operate with and without mitigation. (*Note that mitigation for Existing conditions was not identified because the City of Atlanta and/or GDOT projects will result in operational changes for most of the signalized intersections in the study area.)* Table B shows the queueing at approaches that operate at LOS E or F and are expected to have traffic added by the development.

Parameters evaluated for Mitigation Conditions are identified on the following pages of the Executive Summary and are labelled “Recommended Roadway Improvement Advisory Conditions” since all of these improvements are likely to be needed without the inclusion of project traffic and are expected to be sufficient when including the additional project generated traffic. These parameters are also identified in Report Section D: Traffic Impact Analysis and Report Section F: Recommendations, for reference. The “General Conditions” and “Recommended Roadway Improvement Conditions of Approval” for DRI #4367 are on the pages following Table B results.

Table A: Capacity Analysis Result Summary

ID	Intersection	Existing Control	Mitigation Measure	Movement	AM													PM											
					Existing		Mitigated		No-Build		Mitigated		Build		Mitigated		Site Traffic	Total Traffic	% of Total Traffic	Existing		Mitigated		No-Build		Mitigated		Build		Mitigated		Site Traffic	Total Traffic	% of Total Traffic
					LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay			
1	Howell Mill Rd & 8th St	Signal	120s PM Cycle	**Overall**	**B**	**18.1**	Future Planned Project		**B**	**17.9**	Mitigation Not Needed		**B**	**17.2**	Mitigation Not Needed		**49**	**744**	**7.0%**	**B**	**14.9**	Future Planned Project		**B**	**15.2**	**B**	**13.2**	**B**	**15.1**	**B**	**13.2**	**77**	**1337**	**6.0%**
				EB	D	53.3			D	52.3			D	51.9			7	188	4.0%	E	62.7			E	62.3	D	53.1	E	61.5	D	52.4	14	181	8.0%
				WB	D	45.4			D	44.6			D	43.9			0	42	0.0%	E	55.1			D	54.3	D	46.9	D	52.4	D	45.3	0	102	0.0%
				NB	A	4.5			A	4.9			A	5.2			16	278	6.0%	A	4.9			A	5.3	A	5.0	A	6.0	A	5.7	26	318	8.0%
				SB	A	0.2			A	0.3			A	0.3			26	236	11.0%	A	0.4			A	1.0	A	1.1	A	1.2	A	1.2	37	736	5.0%
2	Howell Mill Rd & 10th St	Signal	N/A	**Overall**	**B**	**18.8**	Future Planned Project		**B**	**17.8**	Mitigation Not Needed		**B**	**17.4**	Mitigation Not Needed		**82**	**1180**	**7.0%**	**B**	**16.5**	Future Planned Project		**B**	**17.2**	Mitigation Not Needed		**B**	**16.6**	Mitigation Not Needed		**128**	**1659**	**8.0%**
				EB	D	54.3			D	46.1			D	44.9			0	180	0.0%	E	59.0			D	52.8			D	51.3			0	136	0.0%
				WB	D	45.4			D	47.3			D	46.6			26	237	11.0%	D	46.6			D	53.5			D	51.5			37	368	10.0%
				NB	A	0.1			A	0.2			A	0.2			23	449	5.0%	A	0.1			A	0.1			A	0.2			40	429	9.0%
				SB	A	0.3			A	0.4			A	0.4			33	314	11.0%	A	1.5			A	1.4			A	1.7			51	726	7.0%
3	10th St & Watkins St	Stop-Control	N/A	NB	B	10.2	Mitigation Not Needed		B	10.4	Mitigation Not Needed		B	11.0	Mitigation Not Needed		0	79	0.0%	B	10.2	Mitigation Not Needed		B	10.7	Mitigation Not Needed		B	10.1	Mitigation Not Needed		0	56	0.0%
				SB	B	13.0			B	13.3			C	19.3			25	36	69.0%	B	13.5			B	14.2			C	24.5			37	58	64.0%
				EBL	A	7.9			A	7.9			A	8.1			0	23	0.0%	A	8.1			A	8.1			A	8.6			0	17	0.0%
				WBL	A	8.0			A	8.0			A	8.2			0	18	0.0%	A	7.6			A	7.6			A	7.8			0	27	0.0%
4	10th St & Northside Dr	Signal	110/130s Cycle Length + EB Through Lane	**Overall**	**C**	**24.2**	Future Planned Project		**C**	**25.0**	**C**	**21.1**	**C**	**28.9**	**C**	**24.0**	**169**	**3321**	**5.0%**	**C**	**31.0**	Future Planned Project		**C**	**33.2**	**C**	**28.2**	**D**	**44.4**	**D**	**37.8**	**268**	**4124**	**6.0%**
				EB	E	61.7			E	61.3	D	46.7	E	63.6	D	44.2	84	417	20.0%	E	72.1			E	68.8	D	54.8	E	77.0	D	53.5	123	323	38.0%
				WB	E	55.5			E	55.8	D	49.9	E	55.8	D	50.6	39	281	14.0%	F	95.8			F	99.8	E	61.8	F	101.5	E	61.4	66	486	14.0%
				NB	B	14.6			B	15.5	B	13.2	B	18.1	B	15.6	23	1438	2.0%	B	14.6			B	16.4	B	16.7	C	26.0	C	24.2	40	1827	2.0%
				SB	B	15.9			B	17.0	B	14.9	C	20.4	B	18.3	23	1185	2.0%	C	20.2			C	23.2	C	24.7	C	34.2	D	39.1	39	1488	3.0%
5	10th St & Hemphill Ave	Signal	N/A	**Overall**	**B**	**18.0**	Mitigation Not Needed		**B**	**18.6**	Mitigation Not Needed		**B**	**19.0**	Mitigation Not Needed		**81**	**1429**	**6.0%**	**C**	**23.6**	Mitigation Not Needed		**C**	**23.7**	Mitigation Not Needed		**C**	**24.2**	Mitigation Not Needed		**127**	**1632**	**8.0%**
				EB	B	11.5			B	12.5			B	13.4			42	750	6.0%	B	13.8			B	15.7			B	17.8			61	497	12.0%
				WB	A	9.9			B	10.7			B	11.2			23	340	7.0%	B	14.5			B	16.4			B	18.2			40	552	7.0%
				NB	C	32.3			C	31.2			C	30.9			8	72	11.0%	C	30.1			C	28.1			C	27.2			13	263	5.0%
				SB	D	44.5			D	43.8			D	43.4			8	267	3.0%	D	45.8			D	42.3			D	40.7			13	320	4.0%
6	Howell Mill Rd & Edgehill Ave	Stop-Control	N/A	WB	B	12.6	Mitigation Not Needed		B	12.9	Mitigation Not Needed		B	14.3	Mitigation Not Needed		39	48	81.0%	B	14.2	Mitigation Not Needed		B	14.6	Mitigation Not Needed		C	20.9	Mitigation Not Needed		63	77	82.0%
				SBL	A	8.6			A	8.7			A	8.9			17	22	77.0%	A	8.5			A	8.6			A	8.9			34	38	89.0%
7	Edgehill Ave & Bellingrath Ave	Stop-Control	N/A	SB	A	8.9	Mitigation Not Needed		A	8.9	Mitigation Not Needed		A	9.0	Mitigation Not Needed		24	35	69.0%	A	8.8	Mitigation Not Needed		A	8.8	Mitigation Not Needed		A	9.1	Mitigation Not Needed		39	57	68.0%
				EBL	A	7.3			A	7.3			A	7.4			17	18	94.0%	A	7.5			A	7.5			A	7.6			25	36	69.0%
8	Edgehill Ave & Watkins St	Stop-Control	N/A	NB	A	8.9	Mitigation Not Needed		A	8.9	Mitigation Not Needed		A	9.0	Mitigation Not Needed		9	60	15.0%	A	8.8	Mitigation Not Needed		A	8.8	Mitigation Not Needed		A	8.9	Mitigation Not Needed		12	52	23.0%
				WBL	A	7.2			A	7.2			A	7.3			0	3	0.0%	A	7.2			A	7.2			A	7.3			0	2	0.0%

Table A (Continued): Capacity Analysis Result Summary

ID	Intersection	Existing Control	Mitigation Measure	Movement	AM														PM											
					Existing		Mitigated		No-Build		Mitigated		Build		Mitigated		Site Traffic	Total Traffic	% of Total Traffic	Existing		Mitigated		No-Build		Mitigated		Build		Mitigated		Site Traffic	Total Traffic	% of Total Traffic
					LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay				LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay			
9	Howell Mill Rd & 11th St	Stop-Control	N/A	WB	B	12.9	Mitigation		B	13.2	Mitigation		B	13.8	Mitigation		9	48	19.0%	C	17.1	Mitigation		C	18.0	Mitigation		C	19.9	Mitigation		12	100	12.0%
				SBL	A	8.5	Not Needed		A	8.6	Not Needed		A	8.7	Not Needed		8	48	17.0%	A	8.7	Not Needed		A	8.9	Not Needed		A	9.1	Not Needed		13	72	18.0%
10	11th St & Bellingrath Ave	Stop-Control	N/A	NB	A	9.6	Mitigation		A	9.7	Mitigation		B	10.1	Mitigation		26	72	36.0%	A	9.7	Mitigation		A	9.7	Mitigation		B	10.4	Mitigation		37	97	38.0%
				WBL	A	7.8	Not Needed		A	7.9	Not Needed		A	8.0	Not Needed		16	23	70.0%	A	7.7	Not Needed		A	7.7	Not Needed		A	7.8	Not Needed		26	35	74.0%
11	Northside Dr & 11th St	Signal	110/130s Cycle Length + EB Pt/Pm LT	**Overall**	**A**	**8.7**	**B**	**10.6**	**A**	**8.9**	**B**	**11.1**	**A**	**9.5**	**B**	**11.8**	**74**	**2535**	**3.0%**	**B**	**14.5**	**B**	**16.2**	**B**	**15.3**	**B**	**13.4**	**B**	**16.7**	**B**	**14.3**	**114**	**3334**	**3.0%**
				EB	E	68.9	D	45.6	E	68.4	D	45.4	E	67.5	D	44.9	17	129	13.0%	F	84.3	D	52.0	F	85.1	D	51.8	F	90.0	D	51.3	25	203	12.0%
				WB	E	67.0	D	51.7	E	66.9	D	51.6	E	66.9	D	51.5	0	9	0.0%	F	80.8	E	68.8	F	81.7	E	70.9	F	81.8	E	71.0	0	39	0.0%
				NB	A	9.3	B	10.6	A	9.9	B	11.3	B	10.5	B	12.0	26	1200	2.0%	B	15.9	B	16.4	B	17.5	B	18.0	B	18.9	B	19.7	37	1552	2.0%
				SB	A	0.9	A	6.4	A	0.9	A	6.7	A	0.9	A	7.2	31	1197	3.0%	A	1.4	A	9.3	A	1.3	A	1.5	A	1.4	A	1.6	52	1540	3.0%
12	Howell Mill Rd & 14th St	Signal	Single-Lane Roundabout w/ SB RT Bypass	**Overall**	**C**	**26.5**	Future Planned Project		**C**	**33.3**	**A**	**9.6**	**C**	**33.5**	**B**	**10.4**	**82**	**1451**	**6.0%**	**D**	**34.5**	Future Planned Project		**D**	**35.3**	**C**	**17.9**	**C**	**32.7**	**C**	**22.7**	**127**	**2111**	**6.0%**
				EB	E	79.2			E	78.4	A	7.2	E	78.4	A	7.6	0	30	0.0%	E	78.9			E	79.4	B	10.2	E	79.4	B	11.1	0	58	0.0%
				WB	E	56.1			E	66.3	A	9.1	E	65.9	A	9.8	8	332	2.0%	E	76.8			E	66.9	C	18.9	E	67.0	C	23.4	13	532	2.0%
				NB	B	17.0			B	19.6	B	10.0	C	20.7	B	11.0	43	492	9.0%	C	21.2			C	26.6	B	11.0	C	28.5	B	12.7	61	626	10.0%
				SB	B	12.6			C	21.0	A	9.7	C	22.1	B	10.4	31	597	5.0%	B	12.0			B	16.9	C	22.6	B	10.3	D	30.3	53	895	6.0%
13	Northside Dr & 14th St	Signal	130s Cycle Add EBT Lane WBT/L crossing Hemphill 3 NBT Lanes 2 SBL Lanes at Hemphill	**Overall**	**B**	**18.1**	Future Planned Project		**D**	**39.2**	**C**	**23.9**	**D**	**37.0**	**C**	**24.4**	**83**	**3002**	**3.0%**	**C**	**22.8**	Future Planned Project		**D**	**43.1**	**C**	**28.5**	**D**	**49.9**	**C**	**30.7**	**126**	**3559**	**4.0%**
				EB	D	47.4			E	55.1	D	48.5	E	58.7	D	48.3	9	444	2.0%	D	42.6			E	56.0	D	36.2	E	58.5	D	36.6	12	355	3.0%
				WB	B	15.0			C	27.7	C	24.5	C	30.9	C	26.1	16	481	3.0%	B	15.4			C	30.5	B	12.7	D	35.1	B	14.7	26	663	4.0%
				NB	B	16.5			E	60.2	C	28.7	D	51.3	C	29.5	35	1128	3.0%	C	29.5			E	67.8	D	50.6	F	82.1	D	54.5	49	1441	3.0%
				SB	A	6.8			B	11.3	A	5.1	B	11.7	A	5.2	23	949	2.0%	B	12.5			B	17.0	A	9.2	B	18.1	B	10.2	39	1100	4.0%
14	14th St & Hemphill Ave	Signal		**Overall**	**C**	**23.2**	Future Planned Project		**D**	**54.0**	**C**	**28.1**	**E**	**74.8**	**C**	**28.9**	**33**	**1221**	**3.0%**	**C**	**31.6**	Future Planned Project		**F**	**184.2**	**C**	**34.4**	**F**	**209.1**	**D**	**36.3**	**50**	**1565**	**3.0%**
				EB	A	9.3			E	62.8	B	14.5	F	115.8	B	15.7	17	404	4.0%	B	16.3			F	272.0	B	18.0	F	328.1	B	19.1	24	361	7.0%
				WB	D	42.5			E	75.5	D	50.4	F	84.3	D	51.0	16	494	3.0%	D	46.0			F	255.0	D	47.4	F	275.9	D	51.2	26	765	3.0%
				NB	B	18.9			C	31.9	C	22.8	C	29.2	C	23.1	0	94	0.0%	C	29.0			D	39.0	D	39.2	D	39.0	D	39.2	0	270	0.0%
				SB	A	7.0			A	5.5	A	6.1	A	7.1	A	6.0	0	229	0.0%	B	10.1			A	5.3	A	7.2	A	5.3	A	7.2	0	169	0.0%
15	Northside Dr & Hemphill Ave	Signal		**Overall**	**D**	**37.2**	Future Planned Project		**D**	**46.8**	**C**	**22.2**	**E**	**63.1**	**C**	**22.3**	**49**	**2326**	**2.0%**	**D**	**43.4**	Future Planned Project		**D**	**50.0**	**C**	**33.8**	**D**	**54.8**	**C**	**34.9**	**76**	**2917**	**3.0%**
				WB	E	58.8			E	56.1	D	52.1	E	59.7	D	52.1	0	78	0.0%	E	69.6			E	65.7	D	53.6	E	65.7	D	53.6	0	269	0.0%
				NB	A	8.4			C	23.4	A	8.2	B	19.4	A	8.2	26	1069	2.0%	B	12.2			C	33.7	B	17.1	D	39.8	B	17.6	37	1363	3.0%
				SB	E	61.6			E	67.4	C	32.3	F	103.8	C	32.7	23	1179	2.0%	E	68.5			E	62.6	D	45.8	E	67.1	D	47.9	39	1285	3.0%
16	Howell Mill Rd & Huff Rd	Signal	120s PM Cycle	**Overall**	**D**	**44.6**	Future Planned Project		**C**	**20.3**	Mitigation not needed		**C**	**20.2**	Mitigation not needed		**65**	**1632**	**4.0%**	**D**	**35.3**	Future Planned Project		**B**	**19.1**	**C**	**30.8**	**B**	**19.8**	**C**	**33.3**	**102**	**2041**	**5.0%**
				EB	F	91.4			D	40.4			D	40.3			8	642	1.0%	F	87.9			E	57.2	D	50.3	E	60.1	D	53.0	13	502	3.0%
				WB	E	78.8			C	27.1			C	27.0			0	6	0.0%	F	83.4			C	34.3	C	29.9	C	34.3	C	30.0	0	20	0.0%
				NB	B	19.9			A	7.3			A	7.3			34	480	7.0%	C	21.9			A	6.2	B	19.8	A	6.4	C	24.1	49	702	7.0%
				SB	B	12.1			A	8.8			A	9.8			23	504	5.0%	B	11.0			A	4.8	C	27.5	A	5.4	C	28.9	40	817	5.0%
17	Howell Mill Rd & 17th St	Signal	Single-Lane Roundabout	**Overall**	**B**	**17.5**	Future Planned Project		**B**	**16.3**	**B**	**11.0**	**B**	**16.4**	**B**	**11.6**	**48**	**1427**	**3.0%**	**C**	**26.4**	Future Planned Project		**C**	**27.1**	**C**	**16.1**	**C**	**27.6**	**B**	**18.4**	**77**	**1865**	**4.0%**
				WB	E	57.5			E	72.4	A	6.9	E	71.6	A	7.2	8	250	3.0%	E	66.5			E	78.3	B	13.4	E	73.8	B	14.7	13	462	3.0%
				NB	B	11.4			A	2.4	B	13.0	A	2.8	B	13.9	25	612	4.0%	B	12.1			A	6.6	B	13.0	A	9.8	B	14.3	37	715	5.0%
				SB	A	7.0			A	6.9	B	10.6	A	7.1	B	11.2	15	565	3.0%	B	16.1			B	16.0	C	20.4	B	17.4	C	24.2	27	688	4.0%

Table B: Queue Analysis Result Summary – Existing, No-Build, and Build Condition Relationships

ID	Intersection	Control	Movement	Storage Length (ft)	Queue Length 50th/95th Percentile (ft)											
					Existing				No-Build				Build			
					AM		PM		AM		PM		AM		PM	
1	Howell Mill Rd 8th St	Signal	EB-LTR	400	142	212	160	226	146	210	168	235	152	216	182	250
4	10th St & Northside Dr	Signal	EB-L	430	82	127	89	122	86	131	89	121	101	150	124	166
			EB-TR	430	185	260	135	178	193	271	137	179	243	331	247	306
			WB-TR	900	55	90	119	154	105	170	222	294	140	215	304	435
			NB-L	180	14	35	48	100	15	36	58	190	26	54	173	344
11	Northside Dr & 11th St	Signal	EB-L	100	62	100	123	175	66	105	130	190	76	117	148	225
			EB-TR	550	0	0	25	61	0	0	38	74	0	9	58	97
12	Howell Mill Rd & 14th St	Signal	WB-LT	305	109	164	240	389	114	176	247	369	121	187	260	399
13	Northside Dr & 14th St	Signal	EB-TR	790	195	245	167	195	362	533	321	386	337	554	340	406
			WB-L	60	46	280	44	51	83	101	129	64	103	113	160	86
			NB-TR	1,100	191	173	258	494	306	682	697	929	340	671	844	990
14	14th St & Hemphill Ave	Signal	EB-LTR	60	34	43	64	77	411	540	575	668	468	581	641	727
			WB-TR	460	203	251	351	425	479	714	1,104	1,408	751	930	1,165	1,472
17	Howell Mill Rd & 17th St	Signal	WB-LTR	1,200	171	245	369	487	180	281	393	595	187	284	400	577

To receive the Notice of Decision Request for Non-Expedited DRI #4367 – 981 Howell Mill Road, the following General Conditions and Roadway Improvement Conditions of Approval are recommended.

General Conditions:

Pedestrian, Bicycle, and Transit Facilities

- Provide sidewalk along road frontage of 10th Street, Howell Mill Road, Edgehill Avenue, and Watkins Street including ramps and crosswalks across the proposed access points in accordance with City of Atlanta's requirements.
- Provide space for the MARTA Bus Stop near Image Avenue.

Recommended Roadway Improvement Conditions of Approval:

10th Street

- Work with City of Atlanta DOT to provide a mid-block pedestrian crossing along 10th Street between Watkins Street and Image Avenue. It is recommended that this includes an RRFB with a pedestrian refuge island constructed at the end of the taper for the planned westbound left-turn lane at the intersection of 10th Street with Howell Mill Road.

Recommended Roadway Improvement Advisory Conditions:

Howell Mill Road

- Recommend the City of Atlanta investigate reducing the cycle length of the signalized intersections during the PM peak period to reduce side-street delay.

Northside Drive

- Recommend that GDOT investigate reducing the cycle lengths of the signalized intersections during both the AM and PM peak periods to reduce side-street delay, especially if lanes are being reduced along 10th Street and 14th Street.

Howell Mill Road at 14th Street

- Recommend that the City of Atlanta investigate the feasibility of having a separate westbound lane for left-turns and removing the split-phased intersection. A single-lane roundabout with a channel for southbound right-turns would be better at the intersection, though it may not be possible to build with the surrounding developments.

Northside Drive at 14th Street & Hemphill Avenue

- Recommend that GDOT consider not reducing the lane capacity until east of these intersections to allow traffic to continue to flow across 14th Street. The intersection should include a dedicated left-turn lane for eastbound left-turns from 14th Street onto Northside Drive and may need additional through-lanes along Northside Drive in both directions, though these recommendations may not be feasible given the limits of available right-of-way.

Howell Mill Road at 17th Street

- Recommend that the City of Atlanta investigate the feasibility of installing a single-lane roundabout at the intersection. Alternatively, the city could investigate the feasibility of installing a separate westbound right-turn lane which could provide some improvement, but the westbound approach may still operate at LOS E at some parts of the day.

These conditions are based on the approved Methodology Meeting inputs and parameters identified in the Georgia Regional Transportation Authority (GRTA) Letter of Understanding (LOU), dated Tuesday, April 15, 2025. The GRTA LOU is provided at the end of this report for reference.

TABLE OF CONTENTS

A. Executive Summary i
A. Introduction 1
B. Existing Conditions 3
B.1. Project Phasing 3
B.2. Transportation Facilities and LOS Standards 3
B.3. Pedestrian and Multi-Use Facilities 4
B.4. Transit and Bicycle Facilities 4
B.5. Traffic Counts 7
C. Future Conditions 9
C.1. Background Growth 9
C.2. Programmed & Planned Regional Transportation Improvements 9
C.3. Project Trip Generation 11
C.4. Trip Distribution and Assignment 11
D. Traffic Impact Analysis 19
D.1. Existing Capacity Analysis 19
D.2. 2030 No-Build Capacity Analysis 21
D.3. 2030 Build Capacity Analysis 23
D.4. Queue Length Analysis 25
D.5. 2030 Build Mitigation Capacity Analysis 1
D.6. Site Driveway Analysis 3
D.7. Additional Analysis 3
E. Conclusion 4
F. Recommendations 6

APPENDIX A – SITE PLAN
APPENDIX B – TRAFFIC COUNT DATA
APPENDIX C – GDOT HISTORICAL TRAFFIC DATA & GROWTH RATE
APPENDIX D – EXISTING, NO-BUILD, & BUILD SYNCHRO REPORTS
APPENDIX E – QUEUE LENGTH REPORTS
APPENDIX F – MITIGATION SYNCHRO REPORTS
APPENDIX G – GRTA LETTER OF UNDERSTANDING (LOU)

LIST OF TABLES

Table 1: Project Trip Generation 11
Table 2: HCM Level-of-Service Performance Criteria 19
Table 3: Capacity Analysis Results –Existing Conditions 19
Table 4: Capacity Analysis Results –2030 No-Build Conditions 21
Table 5: Capacity Analysis Results – 2030 Build Conditions 23
Table 6: Queue Analysis Comparisons 26
Table 7: Capacity Analysis Results –2030 Build Mitigation Conditions 2

LIST OF FIGURES

Figure 1. Site Location Aerial & Study Intersections 2
Figure 2. Site Driveway Locations 2
Figure 3. Alternative Transportation Map – Pedestrian & Multi-Use Path Infrastructure 5
Figure 4. Alternative Transportation Map – Trail & Bicycle Infrastructure Services 6
Figure 5. Alternative Transportation Map – Transit Stations 7
Figure 6. 2025 Existing Traffic Volumes 8
Figure 7. 2030 No-Build Traffic Volumes 10
Figure 8. New Vehicle Traffic Distribution 13
Figure 9. New Vehicle Trip Assignment 14
Figure 10. Pass-By Trip Distribution 15
Figure 11. Pass-By Trip Assignment 16
Figure 12. Total Site Traffic Volumes 17
Figure 13. 2030 Build Traffic Volumes 18

A. Introduction

A new mixed-use residential development is proposed for construction at 981 Howell Mill Road in Atlanta, Georgia. The proposed development will consist of 697 high-rise apartments, 54,380 square feet of commercial space, and a 330-room hotel (130 rooms of which will be set apart for short term rentals). The space will be constructed as three (3) buildings with parking decks below. Building 1 will have its own parking deck and include 334 residential units, 100 hotel rooms, and 25,345 square feet of retail space. Building 2 will consist of the remaining 363 residential units, 30 hotel rooms, and 29,035 square feet of retail space. Building 2 will share a parking deck with Building 3 which will contain the remaining 200 hotel rooms. The two parking decks will have a total of three (3) access points as follows:

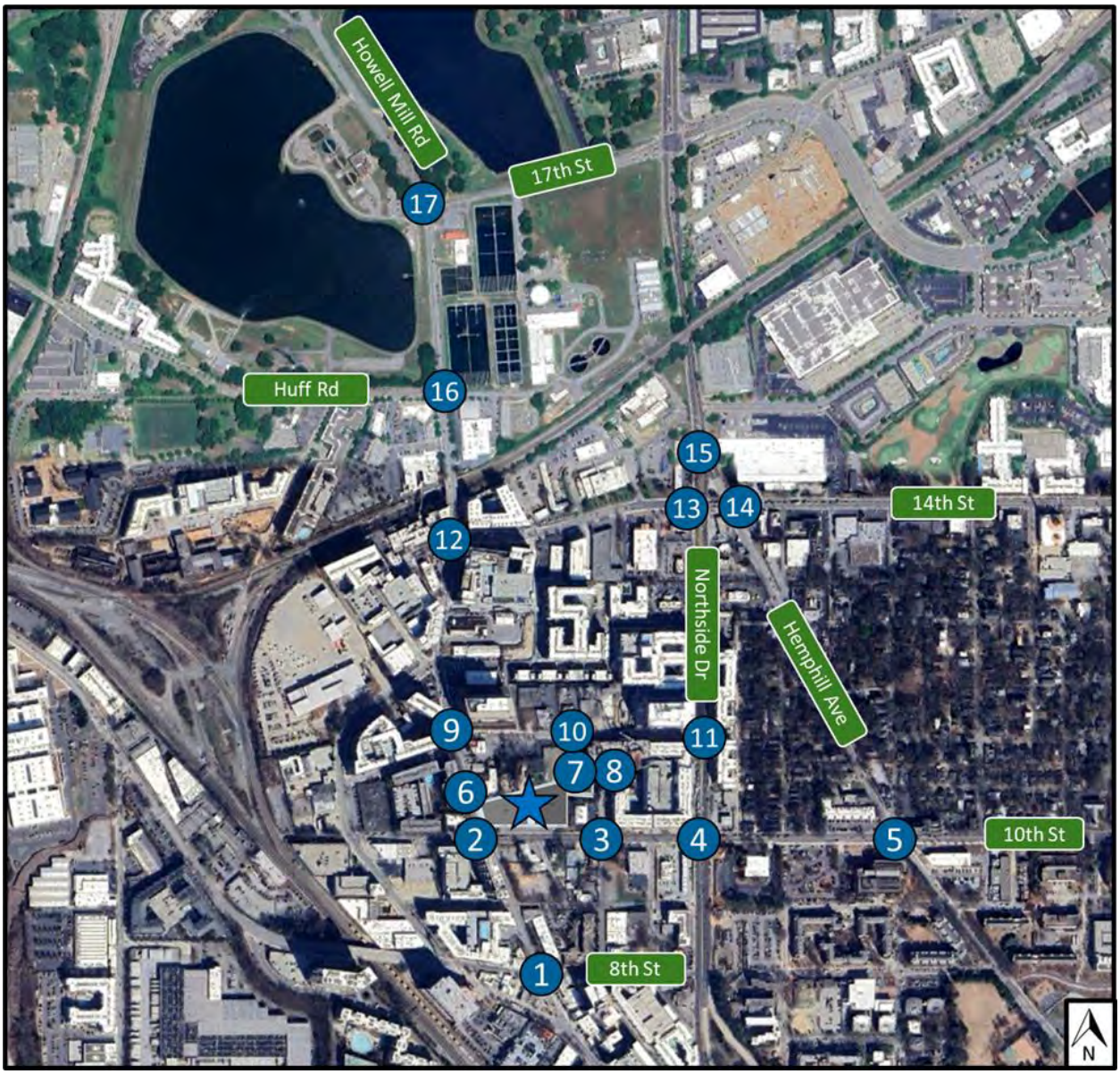
- Building 1 will have a parking deck with one (1) full-access point onto Edgehill Avenue.
- Buildings 2 and 3 will have a shared parking deck with one (1) full-access point onto Watkins Street.
- Building 3 will have a driveway for hotel pickup/drop-off as well as delivery vehicles

The purpose of this assessment is to identify the traffic expected to be generated by new vehicular trips when the development is completed in the year 2030. The traffic study includes existing traffic volumes, future traffic volumes (2030), trip generation, directional distribution, and anticipated traffic impacts at the following existing intersections:

1. Howell Mill Rd & 8th St
2. Howell Mill Rd & 10th St
3. 10th St & Watkins St
4. 10th St & Northside Dr
5. 10th St & Hemphill Ave
6. Howell Mill Rd & Edgehill Ave
7. Edgehill Ave & Bellingrath Ave
8. Edgehill Ave & Watkins St
9. Howell Mill Rd & 11th St
10. 11th St & Bellingrath Ave
11. Northside Dr & 11th St
12. Howell Mill Rd & 14th St
13. Northside Dr & 14th St
14. 14th St & Hemphill Ave
15. Northside Dr & Hemphill Ave
16. Howell Mill Rd & Huff Rd
17. Howell Mill Rd & 17th St
18. Edgehill Ave & Site Driveway A
19. 10th Street & Site Driveway B
20. Watkins Street & Site Driveway C

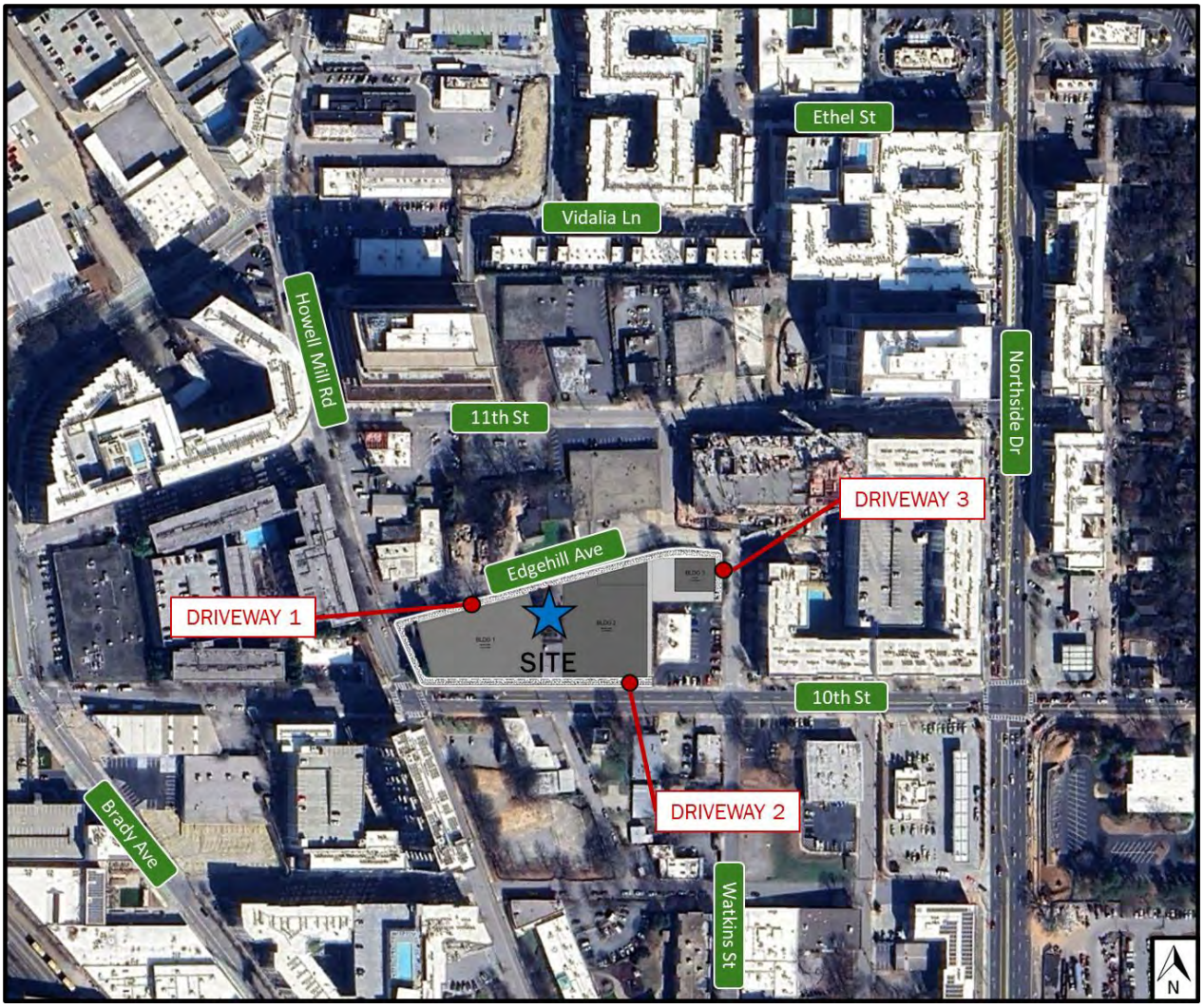
Figure 1 shows the site location and study intersections mentioned above. Figure 2 shows the proposed development with associated driveway locations. Access to the site will be via the three (3) outlets shown in Figure 2 and mentioned above. The proposed site plan is provided in Appendix A.

Figure 1. Site Location Aerial & Study Intersections



1. Howell Mill Rd & 8th St
2. Howell Mill Rd & 10th St
3. 10th St & Watkins St
4. 10th St & Northside Dr
5. 10th St & Hemphill Ave
6. Howell Mill Rd & Edgehill Ave
7. Edgehill Ave & Bellingrath Ave
8. Edgehill Ave & Watkins St
9. Howell Mill Rd & 11th St
10. 11th St & Bellingrath Ave
11. Northside Dr & 11th St
12. Howell Mill Rd & 14th St
13. Northside Dr & 14th St
14. 14th St & Hemphill Ave
15. Northside Dr & Hemphill Ave
16. Howell Mill Rd & Huff Rd
17. Howell Mill Rd & 17th St

Figure 2. Site Driveway Locations



B. Existing Conditions

B.1. Project Phasing

For the purposes of this study, the development will be completed in a single phase by 2030.

B.2. Transportation Facilities and LOS Standards

Major Roadways:

10th Street is primarily a four-lane undivided minor arterial roadway that runs east-west in the study area. The road runs east from its intersection with Howell Mill Road towards I-75 and Midtown with a posted speed limit of 35 MPH. Sections of 10th Street are expected to be reduced to two-lanes in the future to extend the cycle track connection from Brady Avenue towards Georgia Tech.

Howell Mill Road is a two-lane undivided minor arterial that runs north/south, largely parallel to Northside Drive on the west side of the proposed site. The roadway runs south towards Marietta Street and north towards 14th Street, 17th Street, and I-75. Murphy Avenue has markings for bikes to share the road and some sections have dedicated bike lanes. The speed limit along Howell Mill Road is 35 MPH. Much of the land in the area around the proposed site has been recently redeveloped to establish a mixed-use community with similar high-rise residential with ground floor retail. Portions of the roadway are proposed to have dedicated bike lanes in the near future, but this is expected to begin at Brady Avenue and continue north, away from the proposed site.

Northside Drive is a four to five-lane undivided principal arterial roadway that runs north-south, largely parallel to Howell Mill Road as one of the more major roadways in the northwest quadrant of Atlanta. The roadway runs north towards I-75 and south into downtown Atlanta and has seen redevelopment with continued investment to the West Midtown neighborhood. The speed limit along the roadway is 35 MPH.

14th Street is a four-lane undivided minor arterial roadway that runs parallel to 10th Street. It has a posted speed limit of 25 MPH on the west side of Northside Drive and 35 MPH on the east side.

Huff Road is a two-lane undivided major collector roadway that runs west from Howell Mill Road to Marietta Boulevard. It has a posted speed limit of 35 MPH.

17th Street is a two-lane undivided major collector roadway between Howell Mill Road and Northside Drive that widens to a six-lane undivided roadway east of Northside Drive. 17th Street has a posted speed limit of 30 MPH near its intersection with Howell Mill Road.

8th Street is a four-lane undivided major collector roadway that runs between Northside Drive and West Marrietta Street. It has a posted speed limit of 30 MPH.

Minor Roadways:

Watkins Street and Edgehill Avenue are two-lane undivided local roads that run around the proposed site, connecting back to the major roadways. The only portion of these roadways not included in the proposed development is the existing Sherwin-Williams paint store located at

the intersection of Watkins Street and 10th Street. As with the major road frontages, the minor road frontages will also be improved with updated sidewalks, landscaping, and lighting.

11th Street and Bellingrath Avenue are two-lane undivided local roads that are likely to also be used to connect back to Howell Mill Road or Northside Drive, around other adjacent developments.

Hemphill Avenue are two-lane undivided local roads that are likely to also be used to connect back to Howell Mill Road or Northside Drive, around other adjacent developments.

LOS D is considered the minimum standard unless Existing Conditions are lower.

B.3. Pedestrian and Multi-Use Facilities

Sidewalks are constructed along both sides of most of the roads in the area around the proposed site with partial sidewalk along Edgehill Avenue behind the site. Sidewalks in front of neighboring mixed-use and multi-family residential that have been recently constructed are 10 feet wide to accommodate bicycles and electric scooters. Figure 3 illustrates existing and future pedestrian and multi-use path infrastructure that surround the proposed development.

B.4. Transit and Bicycle Facilities

MARTA route 12 operates along 10th Street with stops in front of the proposed site at the intersection of 10th Street and Image Avenue. The development will coordinate with MARTA's planned upgrades to the stop including installing a shelter. MARTA route 94 operates along Northside Drive with stops approximately 1,000 feet east of the proposed site. There is a multi-use path constructed along Georgia Tech's Campus on 10th Street with dedicated bike lanes being constructed along Howell Mill Road, and the rest of 10th Street. GDOT also proposes to construct bike lanes along 14th Street in the future. Figure 4 illustrates the future trails that will surround the proposed development.

Figure 3. Alternative Transportation Map – Pedestrian & Multi-Use Path Infrastructure

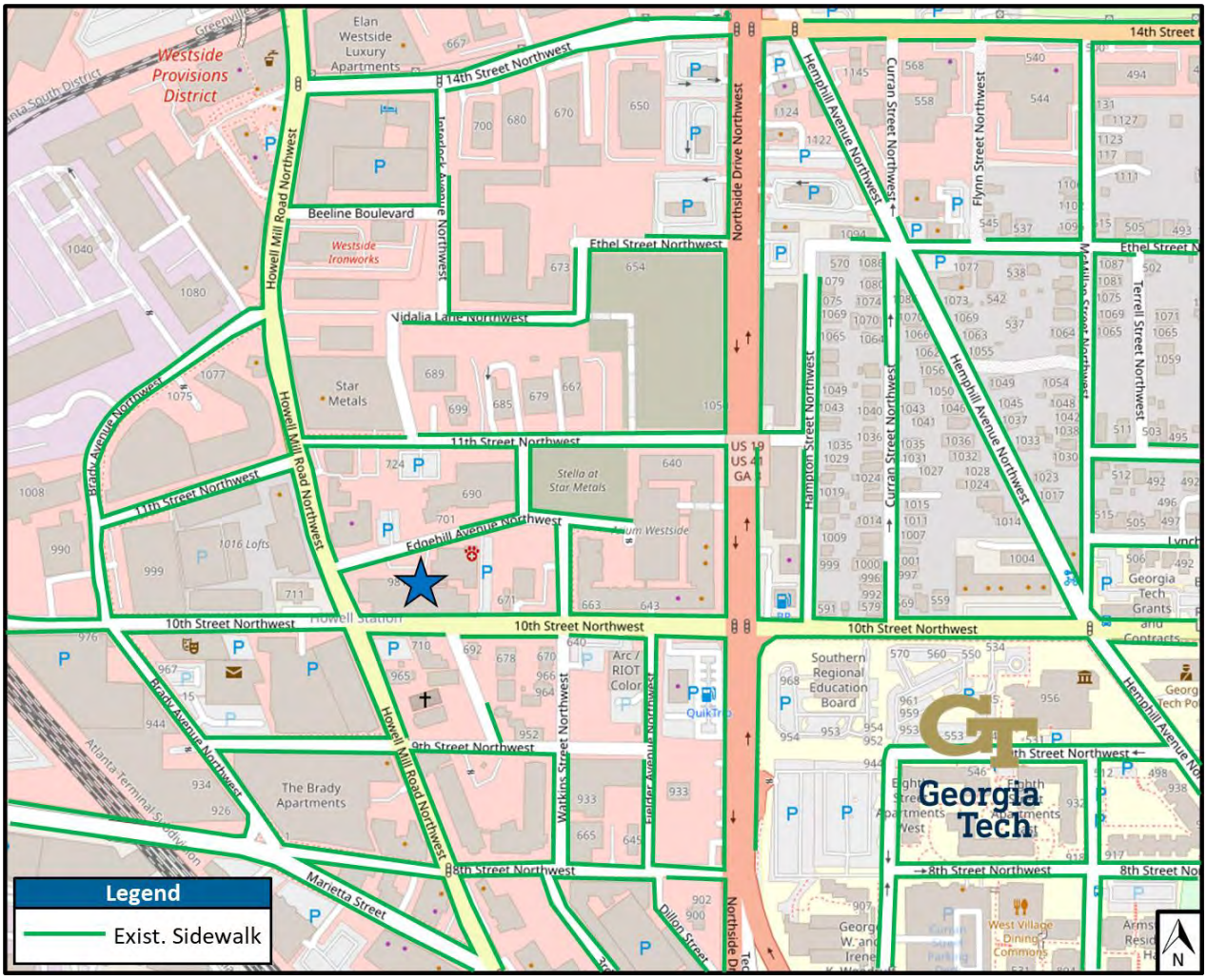


Figure 4. Alternative Transportation Map – Trail & Bicycle Infrastructure Services

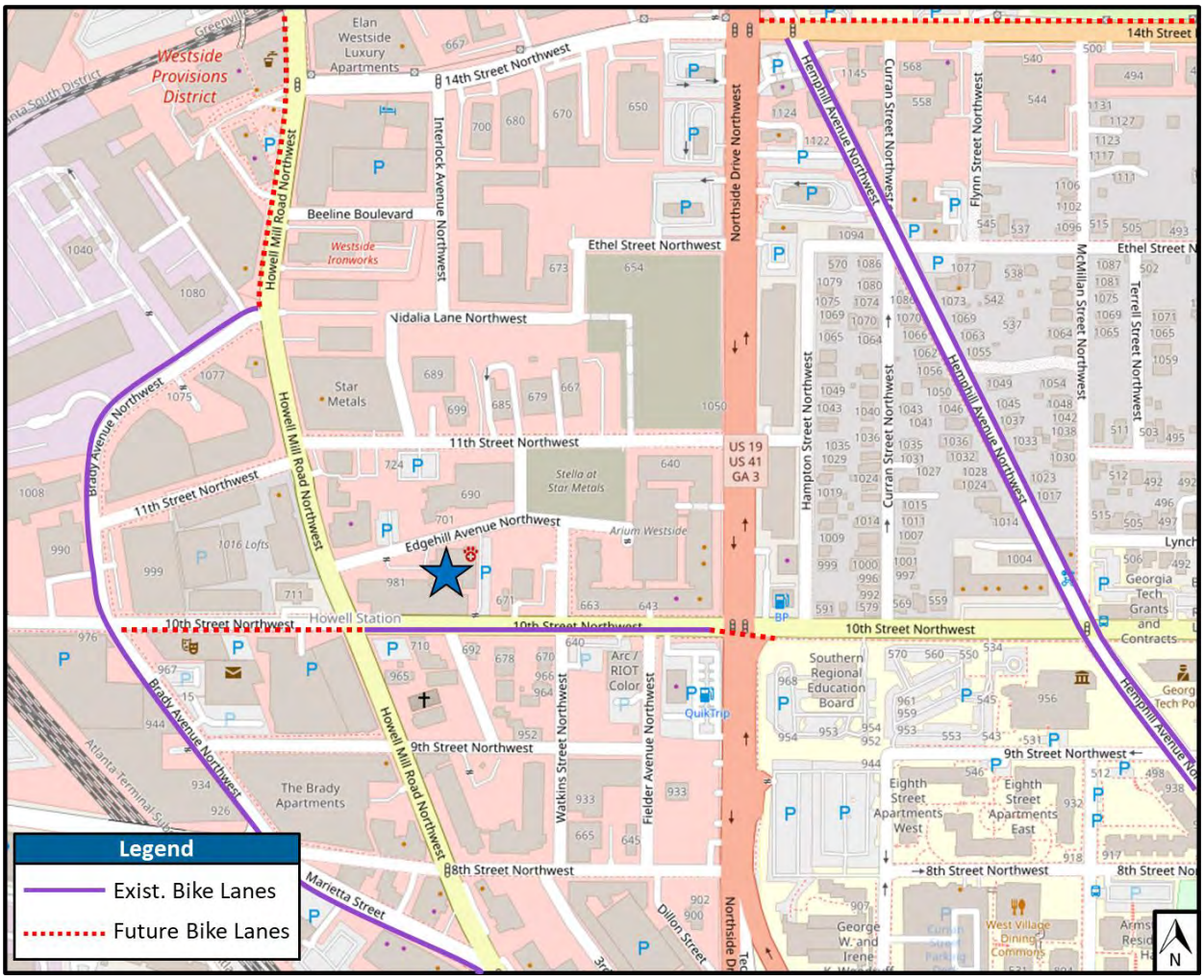
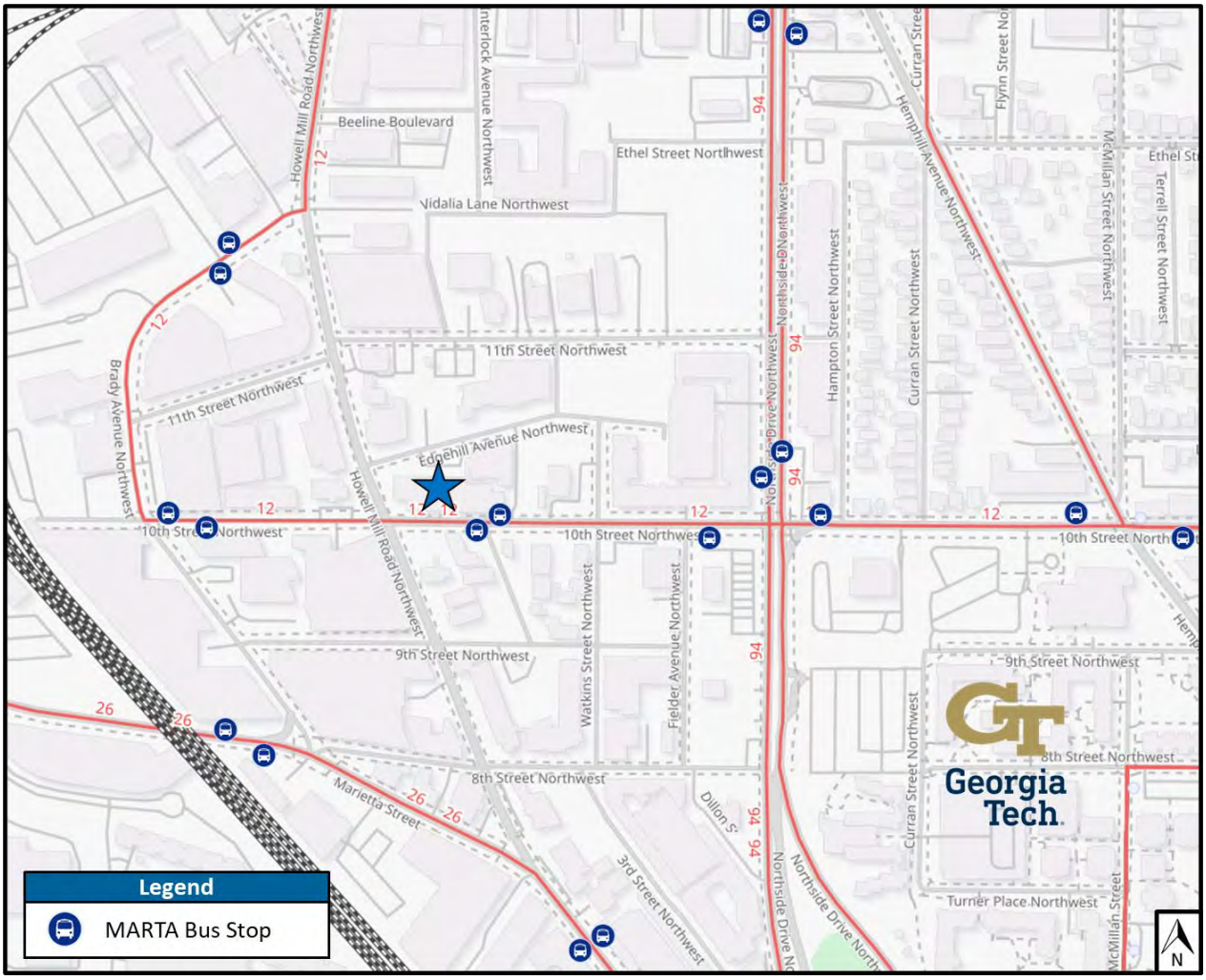


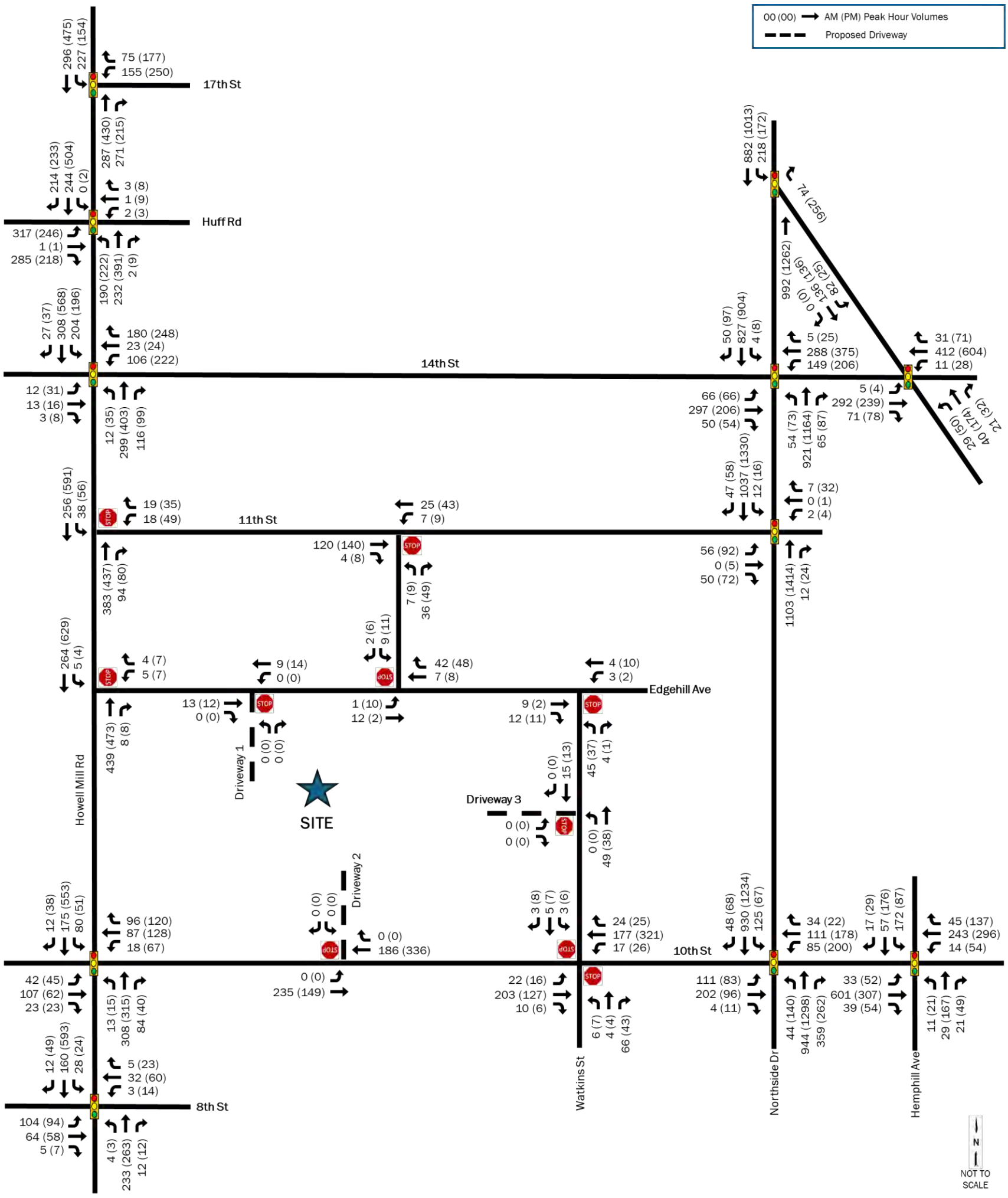
Figure 5. Alternative Transportation Map – Transit Stations



B.5. Traffic Counts

Turning movement counts (TMCs) were collected on Tuesday April 23, 2024, at the intersections originally proposed for the study. Based on feedback received at the Methodology Meeting, data was also collected on Thursday, March 13, 2025, at the intersections added to the scope of the study. Also, 24-hour bi-directional counts were collected along 10th Street, Howell Mill Road, Northside Drive, and 11th Street near the project site. Traffic count data is provided in Appendix B and depicted in Figure 5: 2025 Existing Traffic Volumes.

Figure 6. 2025 Existing Traffic Volumes



C. Future Conditions

C.1. Background Growth

The growth rate in the study area is based on an analysis of US Census data. The project will be built out in 2030. To account for future traffic growth, the existing base year traffic volumes were grown by 1% for five (5) years to develop the 2030 No-Build and 2030 Build traffic volumes. Supporting census data used in this analysis are provided in Appendix C. Figure 6 depicts the 2030 No-Build traffic volumes.

C.2. Programmed & Planned Regional Transportation Improvements

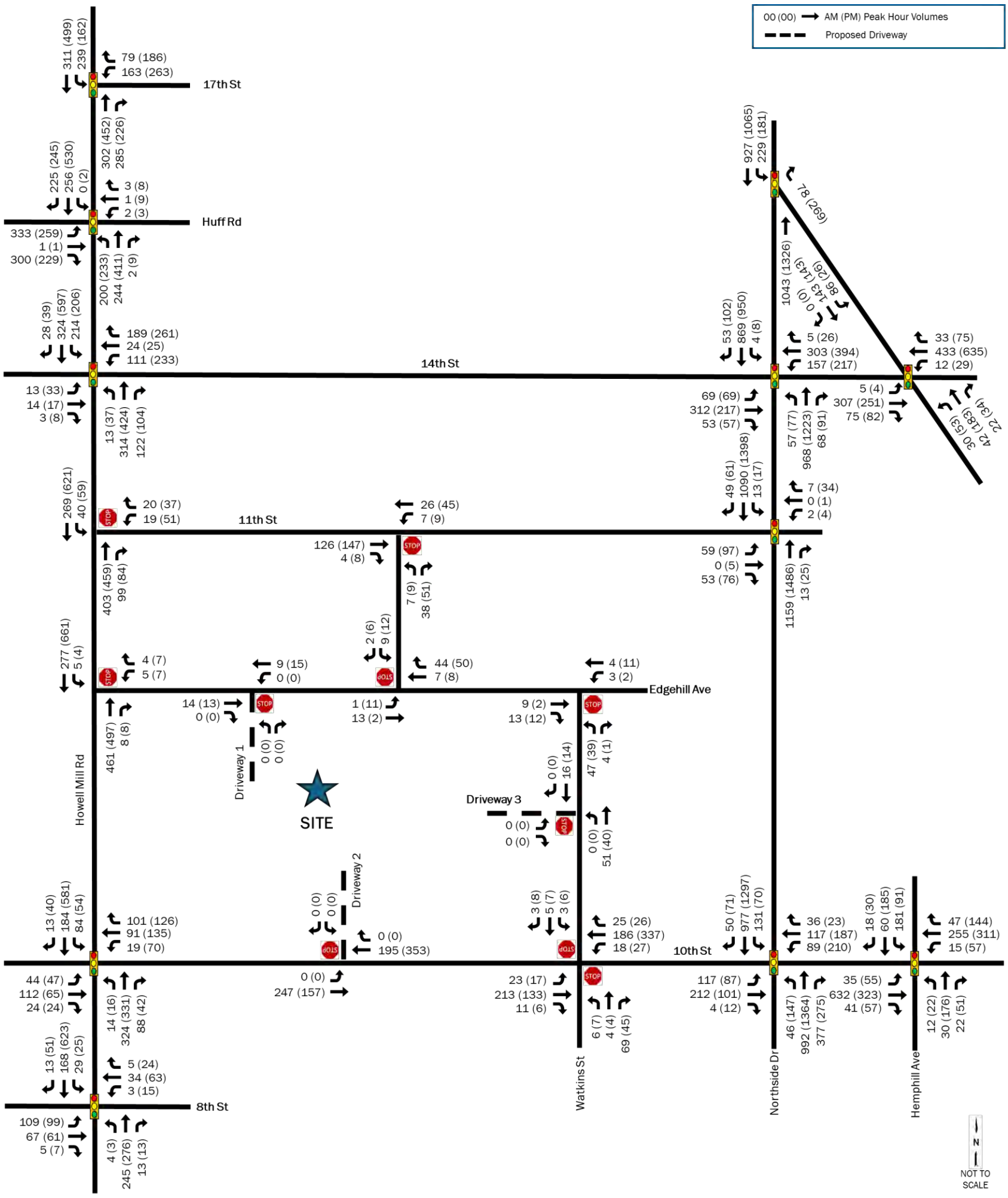
Regional transportation improvements were investigated using the Atlanta Regional Commission's (ARC's) Transportation Improvement Program (TIP) database to verify if any large-scale infrastructure projects are planned in the immediate area as well as correspondence with local agencies. There are three (3) major projects planned for the area that are expected to be completed by 2030:

1. Howell Mill Complete Street: This project is currently under construction and includes bike lanes, pedestrian improvements, and signal improvements for the Howell Mill Road corridor from 8th Street to just north of Collier Road. The project will simplify the lanes and the signal programming along the corridor, leading to less confusion for drivers. While timing changes may be included in the signal updates, they are not currently available, so optimized timings were used with the existing cycle lengths in the future analyses.

2. 10th Street Cycle Track: This project will reduce vehicle lanes along 10th Street between Northside Drive and Howell Mill Road and replace one lane with a cycle track, connecting the existing cycle track along Brady Avenue to the multi-use path constructed along Georgia Tech's Campus. The project will keep the separate westbound left-turn lane at Howell Mill Road and will also add a separate eastbound left-turn lane. At Northside Drive, there will be one receiving lane for vehicles heading west on 10th Street.

3. 14th Street Reconfiguration: GDOT seeks to reduce the lanes along 14th Street between Northside Drive and West Peachtree Street, constructing a cycle track and pedestrian crossings along the corridor. This project includes restriping lanes at the intersection of 14th Street with Northside Drive and Hemphill Avenue to have exclusive lanes for left turns.

Figure 7. 2030 No-Build Traffic Volumes



C.3. Project Trip Generation

Table 1 summarizes the project trip generation calculated using the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition, 2021. Due to the nature of mixed-use developments, a portion of the trips generated by the development is expected to remain internal to the development. For this development, approximately 10% of the total trips are expected to remain internal to the development. Additionally, with public transport, sidewalks, and bike lanes being readily available in the area, approximately 18% of total trips are expected to be multi-modal. Lastly, retail uses are expected to see around 20% pass-by trips according to ITE. These pass-by trips only affect the trips generated by the retail and not the residential or hotel.

Table 1: Project Trip Generation

Land Use (ITE Code)	Variable	Daily	AM Peak		PM Peak	
			IN	OUT	IN	OUT
222	647 Dwelling Units	2,998	58	114	114	90
310	330 Rooms	3,154	88	70	110	106
821	54,380 Square Feet	3,672	58	36	138	144
Gross New Trips		9,824	204	220	362	340
Internal Capture (Affects Retail Only)		*-294*	*-5*	*-3*	*-11*	*-12*
Pass-By (Affects Retail Only)		*-734*	*-9*	*-9*	*-28*	*-28*
Multi-Modal Reduction		*-1,584*	*-35*	*-38*	*-59*	*-54*
Net New Trips		**7,212**	**155**	**170**	**264**	**246**

The development will generate a total of 325 new trips (155 entering and 170 exiting) in the AM peak hour and 430 new trips (264 entering and 246 exiting) in the PM peak hour.

C.4. Trip Distribution and Assignment

The assignment and directional distribution of new project trips is based on existing traffic patterns observed in the overall study area and based on a collaboration with the Georgia Regional Transportation Authority (GRTA) and Georgia Department of Transportation (GDOT) during the DRI MMP Meetings held for this development.

From the trips generated, the following distribution of traffic is expected through the site:

- 10% of traffic will enter and exit the site from the southwest via Howell Mill Road.
- 10% of traffic will enter and exit the site from the southwest via 8th Street.
- 10% of traffic will enter and exit the site from the northwest via Howell Mill Road.
- 5% of traffic will enter and exit the site from the northwest via 17th Street.
- 5% of traffic will enter and exit the site from the northwest via Huff Road.
- 5% of traffic will enter and exit the site from the northwest via 14th Street.
- 5% of traffic will enter and exit the site from the northeast via 14th Street.

- 15% of traffic will enter and exit the site from the northeast via Northside Drive.
- 10% of traffic will enter and exit the site from the south via Northside Drive.
- 15% of traffic will enter and exit the site from the east via 10th Street.
- 10% of traffic will enter and exit the site from the east via Hemphill Avenue.

Figure 7 depicts the Trip Distribution for the proposed mixed-use development. Figure 8 depicts the New Trip Assignments for the development based on the trip distribution. Figure 9 depicts the Pass-By Traffic Distribution which is expected to come from 10th Street and Howell Mill Road. Figure 10 shows the total pass-by trips and Figure 11 shows the total project development trips. Figure 12 depicts the 2030 Build Traffic Volumes for the site (No Build + Total Combined Project Trips).

Figure 8. New Vehicle Traffic Distribution

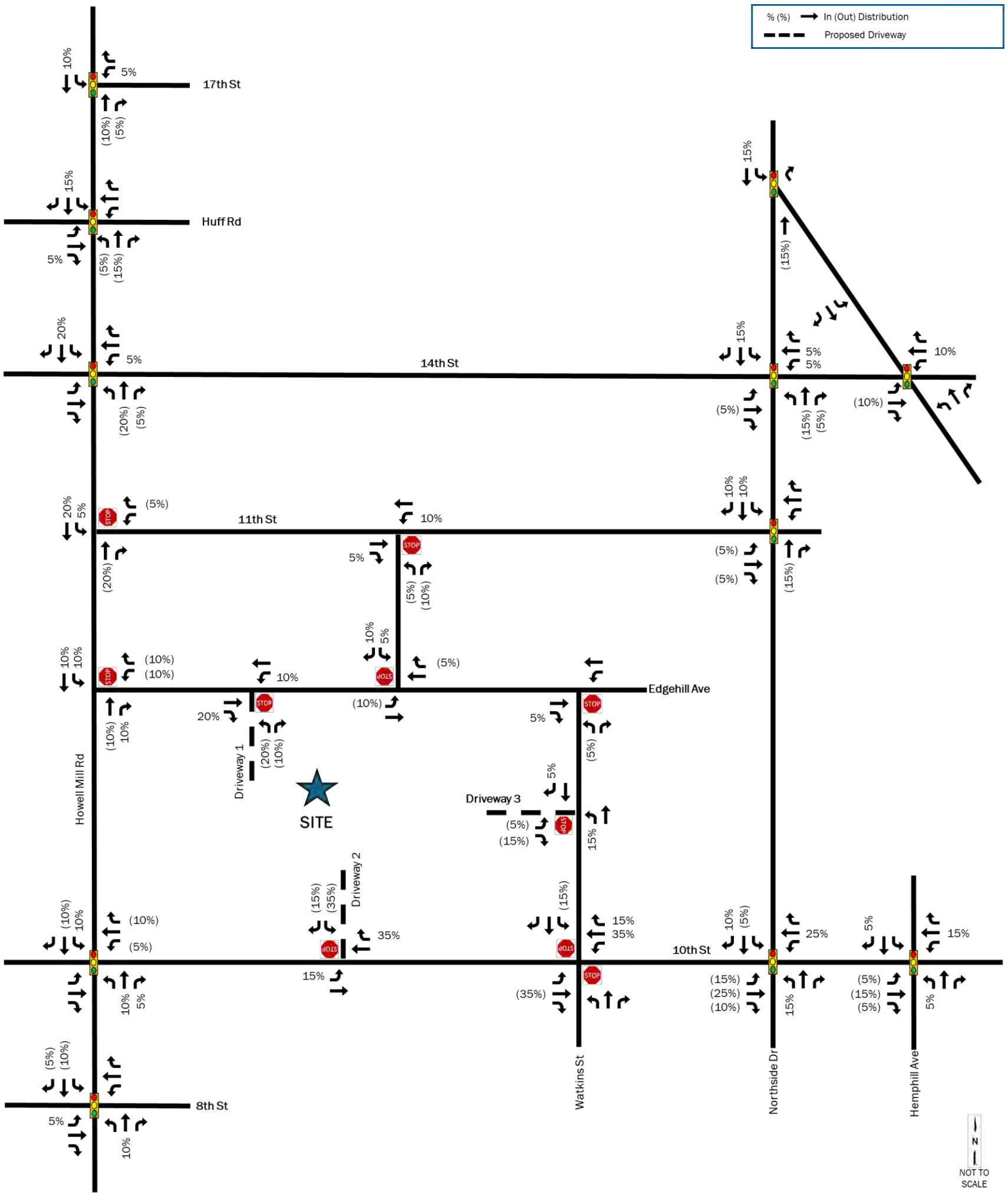


Figure 9. New Vehicle Trip Assignment

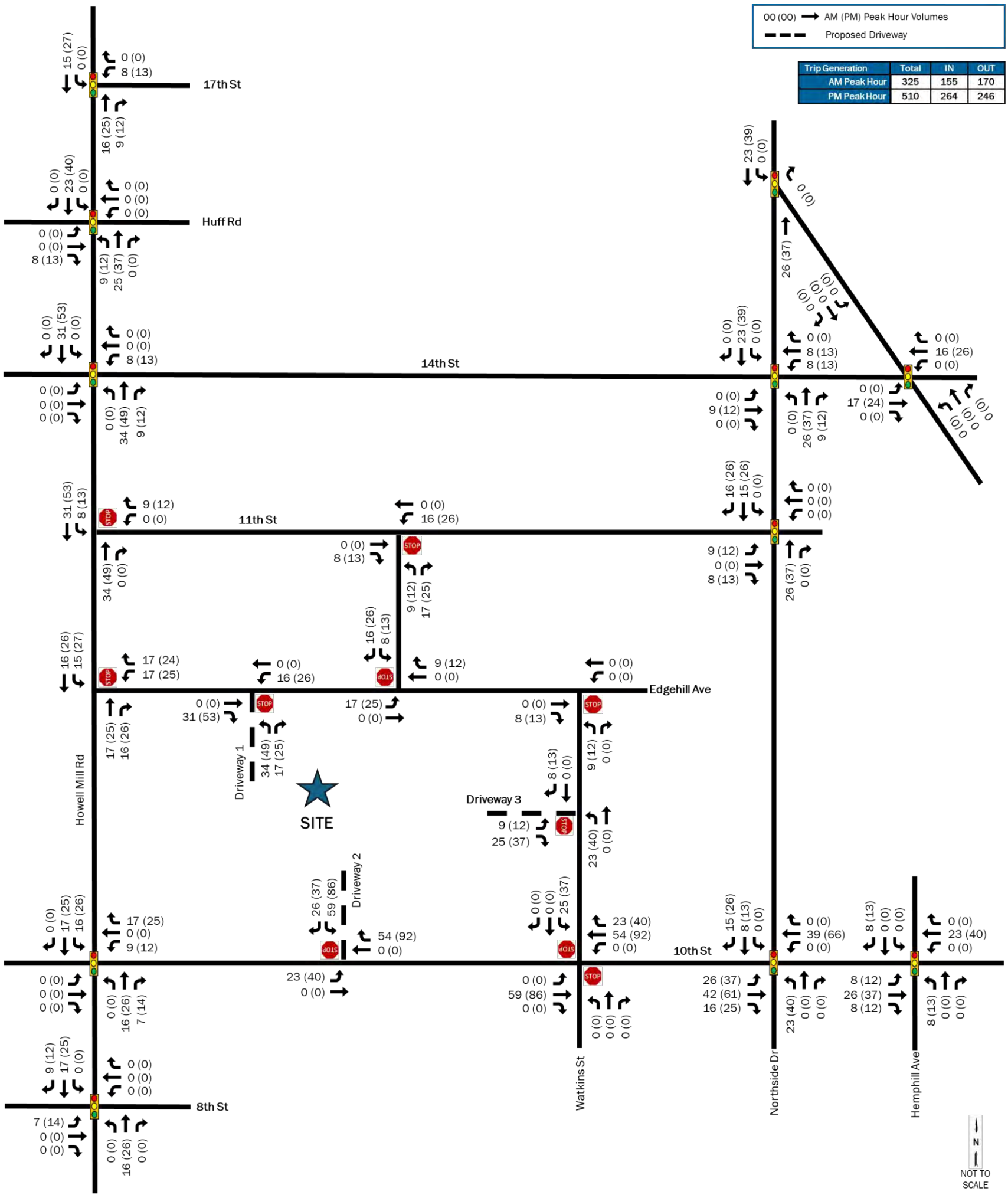


Figure 10. Pass-By Trip Distribution

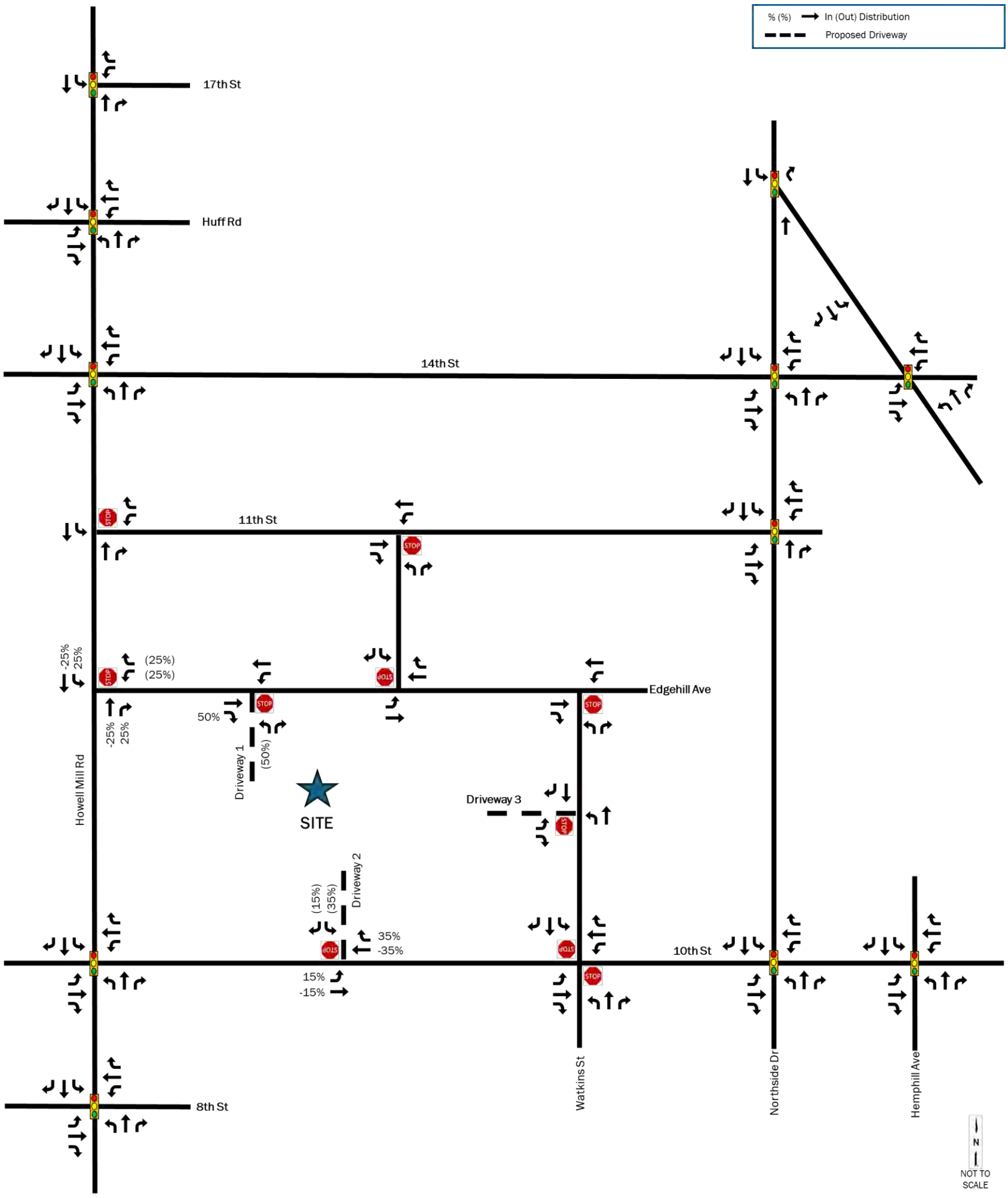


Figure 11. Pass-By Trip Assignment

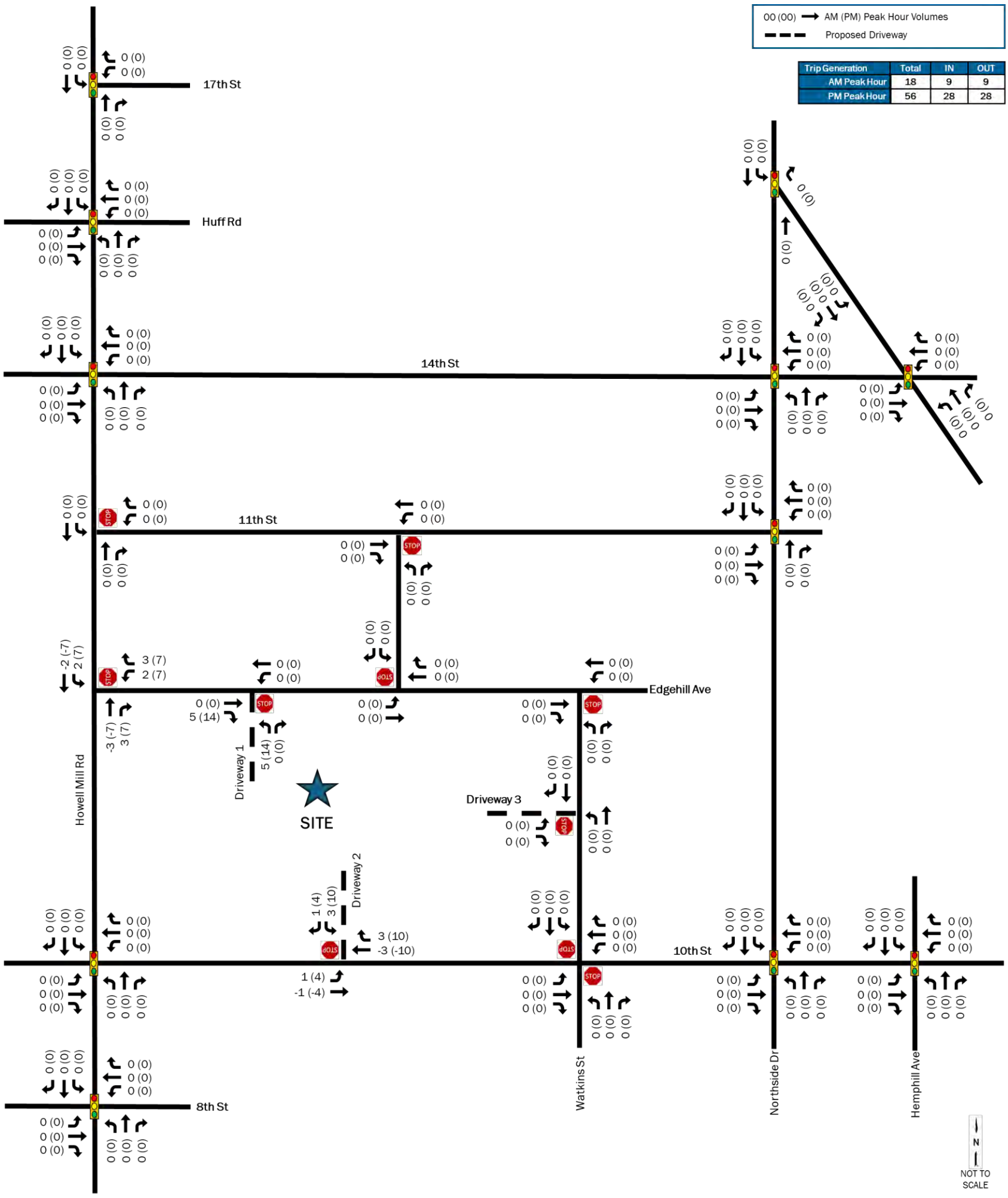


Figure 12. Total Site Traffic Volumes

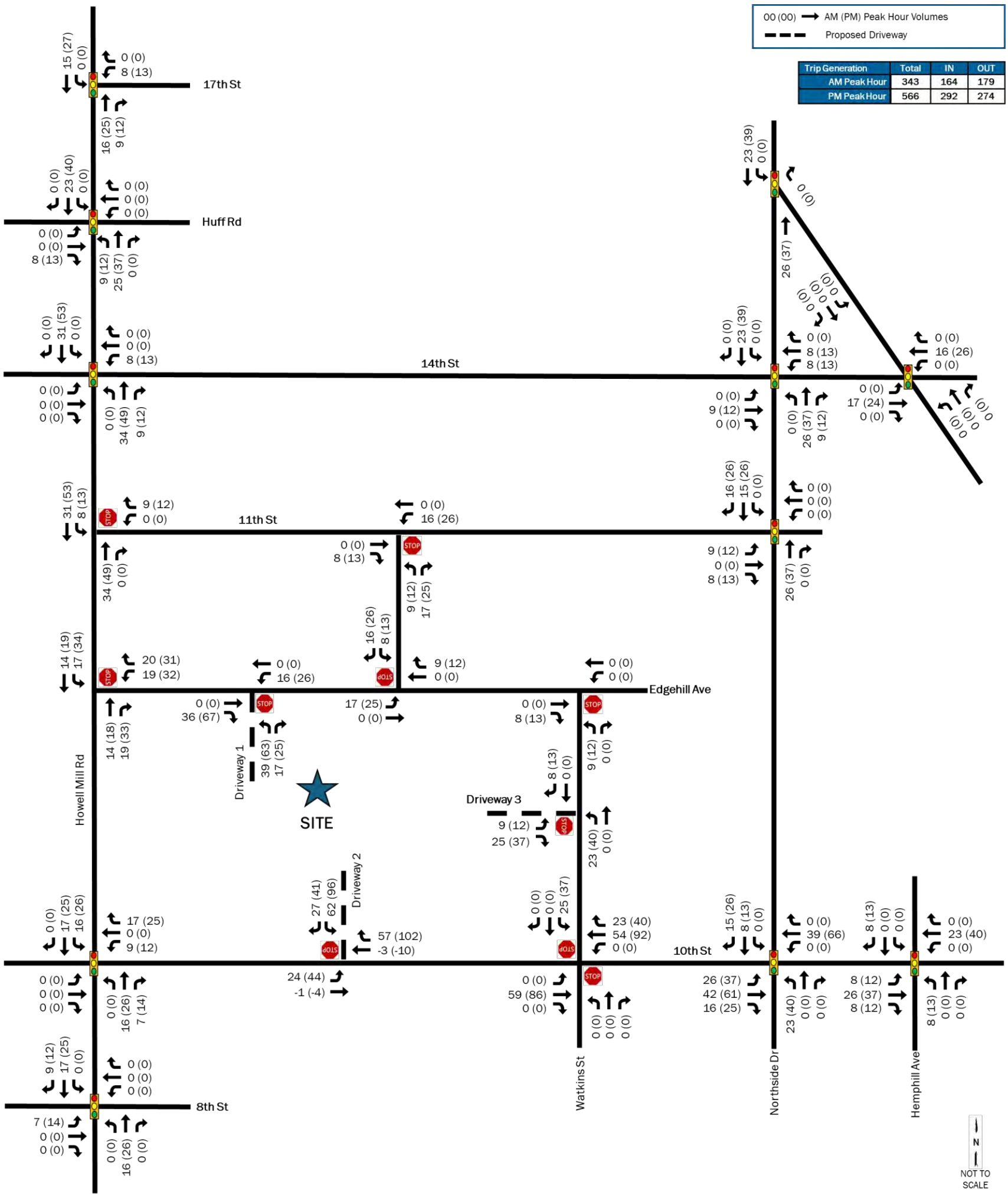
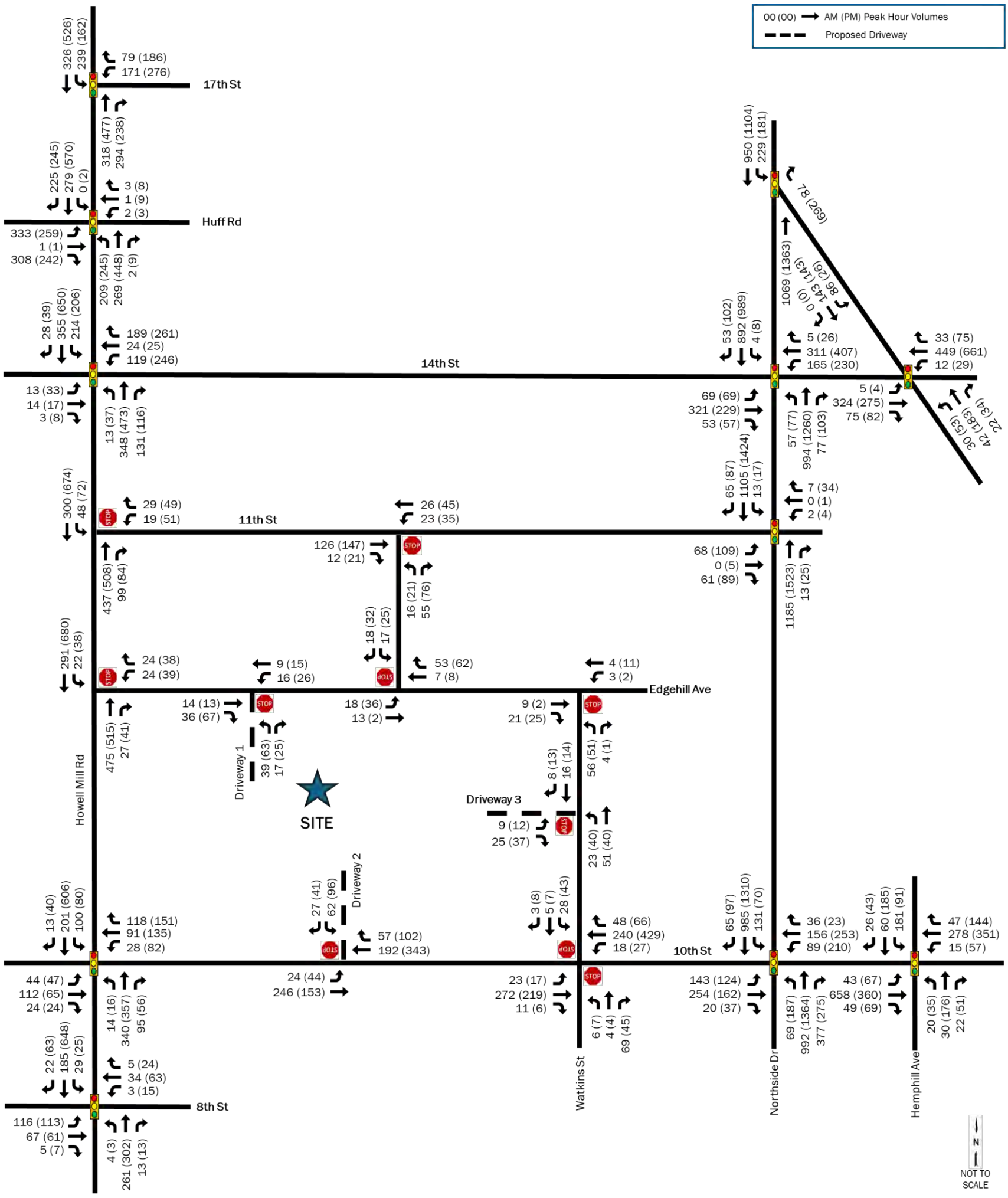


Figure 13. 2030 Build Traffic Volumes



D. Traffic Impact Analysis

The analysis in each of the scenarios for the study was performed using the traffic analysis software Synchro® 12. Average vehicular delays are calculated and reported as Levels of Service (LOS) as defined by the Highway Capacity Manual, 7th Edition (HCM 7). Several intersections could not be calculated using HCM 7, so instead methodologies from the 2000 edition of the Highway Capacity Manual were used. These are intersections that have protected/permissive left-turns from shared lanes and the intersection of Northside Drive with 14th Street and Hemphill Avenue which uses one controller for three intersections.

Performance Criteria pertaining to the HCM methodology is shown in Table 2. The study considers an LOS D as a benchmark for acceptable intersection operation. Synchro® output reports for the study intersections are included in Appendix D.

Table 2: HCM Level-of-Service Performance Criteria

Levels of Service (LOS)	Average Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	≤ 10.0
B	> 10.1 – 20.0	> 10.1 – 15.0
C	> 20.1 – 35.0	> 15.1 – 25.0
D	> 35.1 – 55.0	> 25.1 – 35.0
E	> 55.1 – 80.0	> 35.1 – 50.0
F	> 80.0	> 50.0

D.1. Existing Capacity Analysis

The capacity analysis results of the Existing Conditions are shown in Table 3, representing volumes presented in Figure 5.

Table 3: Capacity Analysis Results –Existing Conditions

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	Howell Mill Rd & 8th St	Signal	**Overall**	**B**	**18.1**	**B**	**14.9**
			EB	D	53.3	E	62.7
			WB	D	45.4	E	55.1
			NB	A	4.5	A	4.9
			SB	A	0.2	A	0.4
2	Howell Mill Rd & 10th St	Signal	**Overall**	**B**	**18.8**	**B**	**16.5**
			EB	D	54.3	E	59.0
			WB	D	45.4	D	46.6
			NB	A	0.1	A	0.1
			SB	A	0.3	A	1.5
3	10th St & Watkins St	Stop-Control	NB	B	10.2	B	10.2
			SB	B	13.0	B	13.5
			EBL	A	7.9	A	8.1
			WBL	A	8.0	A	7.6

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
4	10th St & Northside Dr	Signal	**Overall**	**C**	**24.2**	**C**	**31.0**
			EB	E	61.7	E	72.1
			WB	E	55.5	F	95.8
			NB	B	14.6	B	14.6
			SB	B	15.9	C	20.2
5	10th St & Hemphill Ave	Signal	**Overall**	**B**	**18.0**	**C**	**23.6**
			EB	B	11.5	B	13.8
			WB	A	9.9	B	14.5
			NB	C	32.3	C	30.1
			SB	D	44.5	D	45.8
6	Howell Mill Rd & Edgehill Ave	Stop-Control	WB	B	12.6	B	14.2
			SBL	A	8.6	A	8.5
7	Edgehill Ave & Bellingrath Ave	Stop-Control	SB	A	8.9	A	8.8
			EBL	A	7.3	A	7.5
8	Edgehill Ave & Watkins St	Stop-Control	NB	A	8.9	A	8.8
			WBL	A	7.2	A	7.2
9	Howell Mill Rd & 11th St	Stop-Control	WB	B	12.9	C	17.1
			SBL	A	8.5	A	8.7
10	11th St & Bellingrath Ave	Stop-Control	NB	A	9.6	A	9.7
			WBL	A	7.8	A	7.7
11	Northside Dr & 11th St	Signal	**Overall**	**A**	**8.7**	**B**	**14.5**
			EB	E	68.9	F	84.3
			WB	E	67.0	F	80.8
			NB	A	9.3	B	15.9
			SB	A	0.9	A	1.4
12	Howell Mill Rd & 14th St	Signal	**Overall**	**C**	**26.5**	**D**	**34.5**
			EB	E	79.2	E	78.9
			WB	E	56.1	E	76.8
			NB	B	17.0	C	21.2
			SB	B	12.6	B	12.0
13	Northside Dr & 14th St	Signal	**Overall**	**B**	**18.1**	**C**	**22.8**
			EB	D	47.4	D	42.6
			WB	B	15.0	B	15.4
			NB	B	16.5	C	29.5
			SB	A	6.8	B	12.5
14	14th St & Hemphill Ave	Signal	**Overall**	**C**	**23.2**	**C**	**31.6**
			EB	A	9.3	B	16.3
			WB	D	42.5	D	46.0
			NB	B	18.9	C	29.0
			SB	A	7.0	B	10.1
15	Northside Dr & Hemphill Ave	Signal	**Overall**	**D**	**37.2**	**D**	**43.4**
			WB	E	58.8	E	69.6
			NB	A	8.4	B	12.2
			SB	E	61.6	E	68.5
16	Howell Mill Rd & Huff Rd	Signal	**Overall**	**D**	**44.6**	**D**	**35.3**
			EB	F	91.4	F	87.9

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
			WB	E	78.8	F	83.4
			NB	B	19.9	C	21.9
			SB	B	12.1	B	11.0
17	Howell Mill Rd & 17th St	Signal	**Overall**	**B**	**17.5**	**C**	**26.4**
			WB	E	57.5	E	66.5
			NB	B	11.4	B	12.1
			SB	A	7.0	B	16.1

As shown in Table 3, several of the signalized intersections experience high delay on the side streets. The delay is largely due to signal timings needing to favor higher volume traffic traveling along Howell Mill Road and Northside Drive; however, the intersections of Howell Mill Road with 14th Street, Huff Road, and 17th Street appear to not have enough lane capacity on the side streets to allow traffic to clear.

D.2. 2030 No-Build Capacity Analysis

The results of the 2030 No-Build Condition's capacity analysis are shown in Table 4 and include analysis of the volumes presented in Figure 6.

Table 4: Capacity Analysis Results –2030 No-Build Conditions

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	Howell Mill Rd & 8th St	Signal	**Overall**	**B**	**17.9**	**B**	**15.2**
			EB	D	52.3	E	62.3
			WB	D	44.6	D	54.3
			NB	A	4.9	A	5.3
			SB	A	0.3	A	1.0
2	Howell Mill Rd & 10th St	Signal	**Overall**	**B**	**17.8**	**B**	**17.2**
			EB	D	46.1	D	52.8
			WB	D	47.3	D	53.5
			NB	A	0.2	A	0.1
			SB	A	0.4	A	1.4
3	10th St & Watkins St	Stop-Control	NB	B	10.4	B	10.7
			SB	B	13.3	B	14.2
			EBL	A	7.9	A	8.1
			WBL	A	8.0	A	7.6
4	10th St & Northside Dr	Signal	**Overall**	**C**	**25.0**	**C**	**33.2**
			EB	E	61.3	E	68.8
			WB	E	55.8	F	99.8
			NB	B	15.5	B	16.4
			SB	B	17.0	C	23.2
5	10th St & Hemphill Ave	Signal	**Overall**	**B**	**18.6**	**C**	**23.7**
			EB	B	12.5	B	15.7
			WB	B	10.7	B	16.4
			NB	C	31.2	C	28.1
			SB	D	43.8	D	42.3

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
6	Howell Mill Rd & Edgehill Ave	Stop-Control	WB	B	12.9	B	14.6
			SBL	A	8.7	A	8.6
7	Edgehill Ave & Bellingrath Ave	Stop-Control	SB	A	8.9	A	8.8
			EBL	A	7.3	A	7.5
8	Edgehill Ave & Watkins St	Stop-Control	NB	A	8.9	A	8.8
			WBL	A	7.2	A	7.2
9	Howell Mill Rd & 11th St	Stop-Control	WB	B	13.2	C	18.0
			SBL	A	8.6	A	8.9
10	11th St & Bellingrath Ave	Stop-Control	NB	A	9.7	A	9.7
			WBL	A	7.9	A	7.7
11	Northside Dr & 11th St	Signal	**Overall**	**A**	**8.9**	**B**	**15.3**
			EB	E	68.4	F	85.1
			WB	E	66.9	F	81.7
			NB	A	9.9	B	17.5
			SB	A	0.9	A	1.3
12	Howell Mill Rd & 14th St	Signal	**Overall**	**C**	**33.3**	**D**	**35.3**
			EB	E	78.4	E	79.4
			WB	E	66.3	E	66.9
			NB	B	19.6	C	26.6
			SB	C	21.0	B	16.9
13	Northside Dr & 14th St	Signal	**Overall**	**D**	**39.2**	**D**	**43.1**
			EB	E	55.1	E	56.0
			WB	C	27.7	C	30.5
			NB	E	60.2	E	67.8
			SB	B	11.3	B	17.0
14	14th St & Hemphill Ave	Signal	**Overall**	**D**	**54.0**	**F**	**184.2**
			EB	E	62.8	F	272.0
			WB	E	75.5	F	255.0
			NB	C	31.9	D	39.0
			SB	A	5.5	A	5.3
15	Northside Dr & Hemphill Ave	Signal	**Overall**	**D**	**46.8**	**D**	**50.0**
			WB	E	56.1	E	65.7
			NB	C	23.4	C	33.7
			SB	E	67.4	E	62.6
16	Howell Mill Rd & Huff Rd	Signal	**Overall**	**C**	**20.3**	**B**	**19.1**
			EB	D	40.4	E	57.2
			WB	C	27.1	C	34.3
			NB	A	7.3	A	6.2
			SB	A	8.8	A	4.8
17	Howell Mill Rd & 17th St	Signal	**Overall**	**B**	**16.3**	**C**	**27.1**
			WB	E	72.4	E	78.3
			NB	A	2.4	A	6.6
			SB	A	6.9	B	16.0

As shown in Table 4, with the applied background growth rate and the planned roadway changes, some of the intersections are expected to operate better while others are expected to worsen. Huff Road is expected to benefit greatly from the proposed separation of eastbound right and left turns. The same improvement is expected for the eastbound approach at the intersection of Howell Mill Road with 10th Street. The other intersections along Howell Mill Road are expected to operate similarly to Existing conditions with slight improvements expected by simplifying the lanes along the corridor and signage to prevent confusion to drivers. The intersection of Northside Drive with 14th Street and Hemphill Avenue is expected to be far over capacity, particularly during the PM peak period, with the reduction of lanes proposed for 14th Street. Due to the very high volume of traffic traveling through these intersections, it is recommended that lane reductions occur east of these intersections if possible. The other intersections along Northside Drive are expected to operate similarly to Existing conditions. The intersections that operated satisfactorily in Existing conditions are still expected to operate well by 2030.

D.3. 2030 Build Capacity Analysis

The results of the 2030 Build Condition's capacity analysis are shown in Table 5 and include analyses of the volumes presented in Figure 9.

Table 5: Capacity Analysis Results – 2030 Build Conditions

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	Howell Mill Rd & 8th St	Signal	**Overall**	**B**	**17.2**	**B**	**15.1**
			EB	D	51.9	E	61.5
			WB	D	43.9	D	52.4
			NB	A	5.2	A	6.0
			SB	A	0.3	A	1.2
2	Howell Mill Rd & 10th St	Signal	**Overall**	**B**	**17.4**	**B**	**16.6**
			EB	D	44.9	D	51.3
			WB	D	46.6	D	51.5
			NB	A	0.2	A	0.2
			SB	A	0.4	A	1.7
3	10th St & Watkins St	Stop-Control	NB	B	11.0	B	10.1
			SB	C	19.3	C	24.5
			EBL	A	8.1	A	8.6
			WBL	A	8.2	A	7.8
4	10th St & Northside Dr	Signal	**Overall**	**C**	**28.9**	**D**	**44.4**
			EB	E	63.6	E	77.0
			WB	E	55.8	F	101.5
			NB	B	18.1	C	26.0
			SB	C	20.4	C	34.2
5	10th St & Hemphill Ave	Signal	**Overall**	**B**	**19.0**	**C**	**24.2**
			EB	B	13.4	B	17.8
			WB	B	11.2	B	18.2
			NB	C	30.9	C	27.2
			SB	D	43.4	D	40.7

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
6	Howell Mill Rd & Edgehill Ave	Stop-Control	WB	B	14.3	C	20.9
			SBL	A	8.9	A	8.9
7	Edgehill Ave & Bellingrath Ave	Stop-Control	SB	A	9.0	A	9.1
			EBL	A	7.4	A	7.6
8	Edgehill Ave & Watkins St	Stop-Control	NB	A	9.0	A	8.9
			WBL	A	7.3	A	7.3
9	Howell Mill Rd & 11th St	Stop-Control	WB	B	13.8	C	19.9
			SBL	A	8.7	A	9.1
10	11th St & Bellingrath Ave	Stop-Control	NB	B	10.1	B	10.4
			WBL	A	8.0	A	7.8
11	Northside Dr & 11th St	Signal	**Overall**	**A**	**9.5**	**B**	**16.7**
			EB	E	67.5	F	90.0
			WB	E	66.9	F	81.8
			NB	B	10.5	B	18.9
			SB	A	0.9	A	1.4
12	Howell Mill Rd & 14th St	Signal	**Overall**	**C**	**33.5**	**C**	**32.7**
			EB	E	78.4	E	79.4
			WB	E	65.9	E	67.0
			NB	C	20.7	C	28.5
			SB	C	22.1	B	10.3
13	Northside Dr & 14th St	Signal	**Overall**	**D**	**37.0**	**D**	**49.9**
			EB	E	58.7	E	58.5
			WB	C	30.9	D	35.1
			NB	D	51.3	F	82.1
			SB	B	11.7	B	18.1
14	14th St & Hemphill Ave	Signal	**Overall**	**E**	**74.8**	**F**	**209.1**
			EB	F	115.8	F	328.1
			WB	F	84.3	F	275.9
			NB	C	29.2	D	39.0
			SB	A	7.1	A	5.3
15	Northside Dr & Hemphill Ave	Signal	**Overall**	**E**	**63.1**	**D**	**54.8**
			WB	E	59.7	E	65.7
			NB	B	19.4	D	39.8
			SB	F	103.8	E	67.1
16	Howell Mill Rd & Huff Rd	Signal	**Overall**	**C**	**20.2**	**B**	**19.8**
			EB	D	40.3	E	60.1
			WB	C	27.0	C	34.3
			NB	A	7.3	A	6.4
			SB	A	9.8	A	5.4
17	Howell Mill Rd & 17th St	Signal	**Overall**	**B**	**16.4**	**C**	**27.6**
			WB	E	71.6	E	73.8
			NB	A	2.8	A	9.8
			SB	A	7.1	B	17.4
18	Driveway A & Edgehill Ave	Stop-Control	NB	A	9.0	A	9.5
			WBL	A	7.3	A	7.4
19			SB	B	13.0	C	17.2

ID	Intersection	Control	Movement	AM		PM	
				LOS	Delay	LOS	Delay
	Driveway B & 10th St	Stop-Control	EBL	A	7.8	A	8.5
20	Driveway C & Watkins St	Stop-Control	EB	A	8.7	A	8.8
			NBL	A	7.3	A	7.3

As shown in Table 5, the study intersections are expected to see a slight increase in delay due to the addition of project traffic but are not expected to have a major impact on traffic operations in the area. Intersections that are expected to operate with unsatisfactory LOS in the No-Build analysis are expected to operate similarly with the addition of traffic from the proposed development, though the intersection of Northside Drive with 14th Street and Hemphill Avenue is expected to see an increase in delay if the proposed lane reduction takes place. Furthermore, the site driveways are expected to have little impact on traffic operations along Edgehill Avenue, 10th Street, and Watkins Street and all proposed site driveways are expected to operate satisfactorily.

D.4. Queue Length Analysis

Queue length analysis was conducted for the study intersections that are expected to have at least one approach operate at LOS E or F in future conditions. Queue length analysis results are modeled according to Highway Capacity Manual procedures, using the traffic analysis software Synchro® 12. Queue lengths reported include 50th percentile (average) queues, 95th percentile queues, existing storage lengths, and existing taper lengths to intersection approaches.

Table 6 shows intersection queue results comparing Existing, No-Build, and Build Conditions where study intersections have failing LOS, and/or queues exceeding storage lengths under future traffic conditions and where site traffic is expected to use the movements. An inventory of queue length output reports is included in Appendix E.

Table 6: Queue Analysis Comparisons

Intersection	Movement	Storage Length	Queue Length 50th/95th Percentile											
			Existing				No-Build				Build			
			AM		PM		AM		PM		AM		PM	
Howell Mill Rd & 8th St	EB-LTR	400	142	212	160	226	146	210	168	235	152	216	182	250
10th St & Northside Dr	EB-L	430	82	127	89	122	86	131	89	121	101	150	124	166
	EB-TR	430	185	260	135	178	193	271	137	179	243	331	247	306
	WB-TR	900	55	90	119	154	105	170	222	294	140	215	304	435
	NB-L	180	14	35	48	100	15	36	58	190	26	54	173	344
Northside Dr & 11th St	EB-L	100	62	100	123	175	66	105	130	190	76	117	148	225
	EB-TR	550	0	0	25	61	0	0	38	74	0	9	58	97
Howell Mill Rd & 14th St	WB-LT	305	109	164	240	389	114	176	247	369	121	187	260	399
Northside Dr & 14th St	EB-TR	790	195	245	167	195	362	533	321	386	337	554	340	406
	WB-L	60	46	280	44	51	83	101	129	64	103	113	160	86
	NB-TR	1100	191	173	258	494	306	682	697	929	340	671	844	990
14th St & Hemphill Ave	EB-LTR	60	34	43	64	77	411	540	575	668	468	581	641	727
	WB-TR	460	203	251	351	425	479	714	1,104	1,408	751	930	1,165	1,472
Howell Mill Rd & 17th St	WB-LTR	1200	171	245	369	487	180	281	393	595	187	284	400	577

Queueing analysis suggests that the intersection of Northside Drive with 14th Street and Hemphill Avenue is expected to see large increases in vehicle queues with the reduction of lanes proposed by GDOT. The westbound approach at the intersection of Howell Mill Road with 14th Street currently queues to the next signalized intersection during the PM peak period and will continue to do so without additional improvements to the intersection. The eastbound approach at the intersection of Northside Drive with 11th Street experiences queues that exceed the turn lane. Lastly, the northbound left-turn lane at the intersection of Northside Drive with 10th Street experiences queues that exceed the turn lanes in future conditions, which could result in traffic backing up along the roadway.

D.5. 2030 Build Mitigation Capacity Analysis

The intersections expected to operate with unsatisfactory LOS were analyzed to see how feasible it would be to improve the approaches back to acceptable levels. The capacity analysis results of the Build condition with mitigations are shown in Table 7. The Synchro® output reports for the Mitigation conditions are included in Appendix F. A full analysis of the possible mitigation is included in the Executive Summary of this report. The following changes were analyzed:

Howell Mill Road

- Reduce the cycle length of the signals to 120 seconds during the PM peak period.

Northside Drive

- Reduce the cycle length of the signals to 130 seconds during both peak periods. Some approaches with lower volumes would need to be lowered to 110 seconds.

10th Street & Northside Drive

- Add a second eastbound through-lane in addition to the planned left-turn and shared through/right lane. To mitigate all approaches to LOS D, the cycle length would need to be lowered to 110 seconds.

Northside Drive & 11th Street

- Add an eastbound protected/permissive left-turn phase.
- Note the westbound approach only has nine (9) vehicles during the AM peak period and 39 during the PM peak period (5 not making a right-turn). To lower the approach to LOS D would require a lower cycle length along Northside Drive.

Howell Mill Road & 14th Street

- A single-lane roundabout with a southbound channelized right-turn bypass would lower all approaches to LOS D or better. However, this alternative may not be feasible due to the limited availability of right-of-way and the low volume of the eastbound approach.
- Separating the westbound left turns and through traffic could also reduce the westbound approach to LOS D but may also not be feasible given the lack of available right-of-way.

Northside Drive & 14th Street / Hemphill Avenue

- Keep two (2) through lanes across 14th Street in the eastbound direction and across Hemphill Avenue in the westbound direction, along with the planned exclusive left turn lanes at Northside Drive.
- Separate the shared southbound left/through lane at Northside Drive and Hemphill Avenue.
- Add a third northbound through lane along Northside Drive.

Howell Mill Road & 17th Street

- Constructing a single-lane roundabout would allow all approaches to operate at LOS D or better, though it would impact the Atlanta water treatment facility property.
- The addition of a westbound right-turn lane could also improve traffic coming off 17th Street, but it would not improve the approach enough to achieve LOS D at all times.

Table 7: Capacity Analysis Results –2030 Build Mitigation Conditions

ID	Intersection	Mitigation	Movement	AM		PM	
				LOS	Delay	LOS	Delay
1	Howell Mill Rd & 8th St	120s PM Cycle	**Overall**	Mitigation not needed		**B**	**13.2**
			EB			D	52.4
			WB			D	45.3
			NB			A	5.7
			SB			A	1.2
4	10th St & Northside Dr	110/130s Cycle Length + EB Through Lane	**Overall**	**C**	**24.0**	**D**	**37.8**
			EB	D	44.2	D	53.5
			WB	D	50.6	E	61.4
			NB	B	15.6	C	24.2
			SB	B	18.3	D	39.1
11	Northside Dr & 11th St	110/130s Cycle Length + EB Pt/Pm LT	**Overall**	**B**	**11.8**	**B**	**14.3**
			EB	D	44.9	D	51.3
			WB	D	51.5	E	71.0
			NB	B	12.0	B	19.7
			SB	A	7.2	A	1.6
12	Howell Mill Rd & 14th St	Single-Lane Roundabout w/ SB RT Bypass	**Overall**	**B**	**10.4**	**C**	**22.7**
			EB	A	7.6	B	11.1
			WB	A	9.8	C	23.4
			NB	B	11.0	B	12.7
			SB	B	10.4	D	30.3
13	Northside Dr & 14th St	130s Cycle Add EBT Lane WBT/L crossing Hemphill 3 NBT Lanes 2 SBL Lanes at Hemphill	**Overall**	**C**	**24.4**	**C**	**30.7**
			EB	D	48.3	D	36.6
			WB	C	26.1	B	14.7
			NB	C	29.5	D	54.5
			SB	A	5.2	B	10.2
14	14th St & Hemphill Ave		**Overall**	**C**	**28.9**	**D**	**36.3**
			EB	B	15.7	B	19.1
			WB	D	51.0	D	51.2
			NB	C	23.1	D	39.2
			SB	A	6.0	A	7.2
15	Northside Dr & Hemphill Ave		**Overall**	**C**	**22.3**	**C**	**34.9**
			WB	D	52.1	D	53.6
			NB	A	8.2	B	17.6
			SB	C	32.7	D	47.9
16	Howell Mill Rd & Huff Rd	120s PM Cycle	**Overall**	Mitigation not needed		**C**	**33.3**
			EB			D	53.0
			WB			C	30.0
			NB			C	24.1
			SB			C	28.9
17	Howell Mill Rd & 17th St	Single-Lane Roundabout	**Overall**	**B**	**11.6**	**B**	**18.4**
			WB	A	7.2	B	14.7
			NB	B	13.9	B	14.3
			SB	B	11.2	C	24.2

D.6. Site Driveway Analysis

The site driveways were also analyzed to see if they warranted turn lanes using methodologies from GDOT's access manual which looks at the average annual daily traffic along the roadway, speed limit, number of lanes, and the number of daily vehicles making turns at an intersection. According to GDOT's methodologies, each of the driveways warrant turn lanes, though Driveway C along Watkins Street does not warrant a southbound right-turn lane. However, since the driveways are expected to operate satisfactorily without turn lanes (as shown in Table 5), and there is limited room for the inclusion of additional lanes without impacts to sidewalks and other infrastructure, turn lanes are not recommended.

D.7. Additional Analysis

The City of Atlanta and MARTA requested that the study examine the best solution for providing a mid-block pedestrian crossing along 10th Street between Howell Mill Road and Northside Drive since the two intersections are over 1,000 feet apart. Looking at the expected traffic volumes coming out of Watkins Street (shown in Figure 13), it does not appear that the intersection will warrant a traffic signal. Instead, because the city plans to reduce lanes along 10th Street in this section for the construction of a cycle track, a Rectangular Rapid Flashing Beacon (RRFB) with a pedestrian refuge island should be considered at the end of the westbound left-turn lane for the intersection with Howell Mill Road. This would place the crossing just east of Image Avenue, near the existing locations of the MARTA bus stops. The MARTA bus stops could then be moved to either side of the pedestrian crossing, allowing for safe and easy access to public transit and staying close to the developments plan for pedestrian movement around the property.

E. Conclusion

A new mixed-use residential development is proposed for construction at 981 Howell Mill Road in Atlanta, Georgia. The proposed development will consist of 697 high-rise apartments, 54,380 square feet of commercial space, and a 330-room hotel (130 rooms of which will be set apart for short term rentals). The space will be constructed as three buildings with parking decks below. Building 1 will have its own parking deck and include 334 residential units, 100 hotel rooms, and 25,345 square feet of retail space. Building 2 will consist of the remaining 363 residential units, 30 hotel rooms, and 29,035 square feet of retail space. Building 2 will share a parking deck with Building 3 which will contain the remaining 200 hotel rooms. The two parking decks will have a total of three (3) access points as follows:

- Building 1 will have a parking deck with one (1) full-access point onto Edgehill Avenue.
- Buildings 2 and 3 will have a shared parking deck with one (1) full-access point onto Watkins Street.
- Building 3 will have a driveway for hotel pickup/drop-off as well as delivery vehicles.

The development is expected to be completed by 2030 and will generate a total of 7,212 new daily trips according to data from the Institute of Transportation Engineers (ITE) trip generation manual. Of these daily volumes, 325 new trips (155 entering and 170 exiting) are expected to occur during the AM peak hour while 510 new trips (264 entering and 246 exiting) are expected to occur during the PM peak hour.

In Existing conditions, there are several intersections that operate at unsatisfactory levels of service (LOS) during the peak periods, particularly the side street approaches at the signalized intersections along Howell Mill Road and Northside Drive. The City of Atlanta is currently working on projects to add bike lanes and upgrade the intersections along Howell Mill Road, and to add bike lanes and change the intersection operations at Northside Drive with 10th Street. The Georgia Department of Transportation (GDOT) also has plans to add bike lanes along 14th Street, east of Northside Drive, which is expected to completely change intersection operations. The only intersection that is currently operating with poor side-street LOS and not affected by future planned changes is the intersection of Northside Drive and 11th Street. The 11th Street approaches operate at LOS E during the AM peak period and LOS F during the PM peak period due to signal timings needing to favor the much higher volume Northside Drive approaches. Without changing the intersection geometry completely, the only way to reduce the delay along the side streets would be to lower the cycle length of the signal, though the westbound approach would still operate at LOS E since the volume of traffic is very low at this approach. The eastbound approach would also benefit from having a protected/permissive left-turn phase, which appears to be warranted with 92 vehicles making a left-turn at the intersection during the PM peak period.

In No-Build conditions, many of the issues on the side street approaches along Howell Mill Road and Northside Drive are expected to continue even after the planned improvements to the roadway.

Additionally, the planned changes to 14th Street are expected to negatively impact traffic operations at the intersection of Northside Drive, 14th Street, and Hemphill Avenue. It is expected that the reduction and restriction of lanes along 14th Street will result in high delays on the eastbound and westbound approaches, as well as the southbound approach on Northside Drive because more time will be needed to attempt to clear 14th Street.

In Build conditions, the addition of project traffic is expected to have minor impacts on future traffic operations at the study intersections, with only slight increases in delay. The intersections already experiencing high side-street delays and are expected to continue to operate similarly to No-Build conditions if improvements are not made to mitigate the delay seen in Existing and No-Build conditions.

Queueing analysis suggests that the intersections of Northside Drive and 11th Street as well as 14th Street and Hemphill Avenue already experience queues that exceed available storage, and the intersection with 10th Street is expected to be exceeded in the future. Furthermore, the intersection of Howell Mill Road with 14th Street also already exceeds available storage in the westbound direction.

F. Recommendations

Based on the analysis prepared for this study, there are few practical geometric mitigation measures for the surrounding roadways. It is recommended that the proposed development include infrastructure for pedestrians (i.e. sidewalks and crosswalks) along the site's road frontage in accordance with the City of Atlanta's standards. Additionally, the developer should work with MARTA and the city to construct a midblock pedestrian crossing between Image Avenue and Watkins Street with space set aside for the MARTA bus stops near Image Avenue.

While the site traffic is not expected to greatly impact the surrounding roadways, it is recommended that the City of Atlanta and GDOT investigate the feasibility of lowering the cycle lengths along Howell Mill Road and Northside Drive to reduce delay along the side streets. GDOT should also consider installing an eastbound protected/permissive left-turn phase at the intersection of Northside Drive with 11th Street, if possible.

Other recommendations for the City of Atlanta are to investigate the feasibility of additional westbound lanes at the intersection of Howell Mill Road with 14th Street and 17th Street to improve side-street capacity.

Lastly, the planned GDOT project for 14th Street is expected to have a major impact on traffic operations at the intersection of Northside Drive with 14th Street and Hemphill Avenue, that if not adjusted, will result in heavy delays in the area. While bike lanes are desired along the corridor, it is recommended that the lane reductions occur east of these intersections to allow traffic to flow better throughout the area.

APPENDIX

APPENDIX A – SITE PLAN

APPENDIX B – TRAFFIC COUNT DATA

APPENDIX C – GDOT HISTORICAL TRAFFIC DATA & GROWTH RATE

APPENDIX D – EXISTING, NO-BUILD, & BUILD SYNCHRO REPORTS

APPENDIX E – QUEUE LENGTH REPORTS

APPENDIX F – BUILD MITIGATION SYNCHRO REPORTS

APPENDIX G – GRTA LETTER OF UNDERSTANDING (LOU)

APPENDIX A

SITE PLAN

DEVELOPMENT SUMMARY

BLDG 1 (MIXED-USE)
- RESIDENTIAL
  - UNITS 334
- COMMERCIAL
  - HOTEL (STR) 87,356 SF (100 KEYS)
  - RETAIL
  - GFA 25,345 SF

BLDG 2 (MIXED-USE)
- RESIDENTIAL
  - UNITS 363
- COMMERCIAL
  - HOTEL (STR) 28,238 SF (30 KEYS)
  - RETAIL
  - GFA 29,035

BLDG 3 (HOTEL)
- COMMERCIAL
  - HOTEL 130,027 SF (200 KEYS)

TOTAL
- RESIDENTIAL 697 UNITS (304.4 UNITS/AC)
- HOTEL 245,620 SF (2.46 FAR)
- RETAIL 54,380 SF (0.55 FAR)

PHASING
CONSTRUCTION PHASING MAY OCCUR IN ORDER OF BUILDING NAME CONVENTION.

TRANSPORTATION INFO

PARKING

BLDG	PROPOSED	MIN
1	400	317
2	400	263
3	0	212

ALL PARKING AND LOADING WILL OCCUR IN STRUCTURED PARKING. ALL LOADING WILL BE LOCATED IN STRUCTURED PARKING AND SHARE THE SAME DRIVEWAYS AS VEHICULAR PARKING. PARKING FOR BLDG 3 WILL BE COLOCATED IN THE BLDG 2 DECK.

SITE INFO

JHA	CITY OF ATLANTA
ZONING	MRC-3
OVERLAY	MARIETTA STREET
OVERLAY	UPPER WESTSIDE
SITE AREA	
NLA	99,864 SF (2.29 AC)
GLA	132,758 SF (3.05 AC)
SETBACKS	
SIDE & REAR	0'
STREETSCAPE	SEE PLAN
MAX BUILDING COVERAGE	84,884 SF (85% NLA)
BUILDING HEIGHT	
MAX	225'

GENERAL INFO

DRI NUMBER: TBD
981 HOWELL MILL

TRAFFIC CONSULTANT
ERIKA BECKER
NV5
ERIKA.BECKER@NV5.COM
615.796.8424
10745 WESTSIDE WAY, SUITE 300
ALPHARETTA, GA 30009
678.795.3600

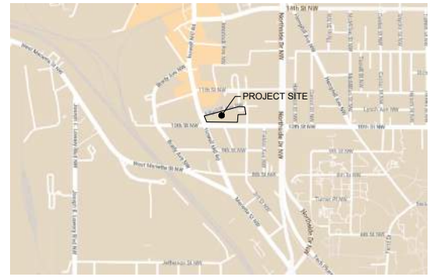
SITE PLANNER
ROBERT BARCLIFT, PE
BARCLIFT CONSULTING
ROBERT@BARCLIFTCONSULTLING.COM
404.771.0920

CLIENT CONTACT
ALEX HAY
ANiMAL
ALEX@ANIMALGROUP.CO
323.447.4434

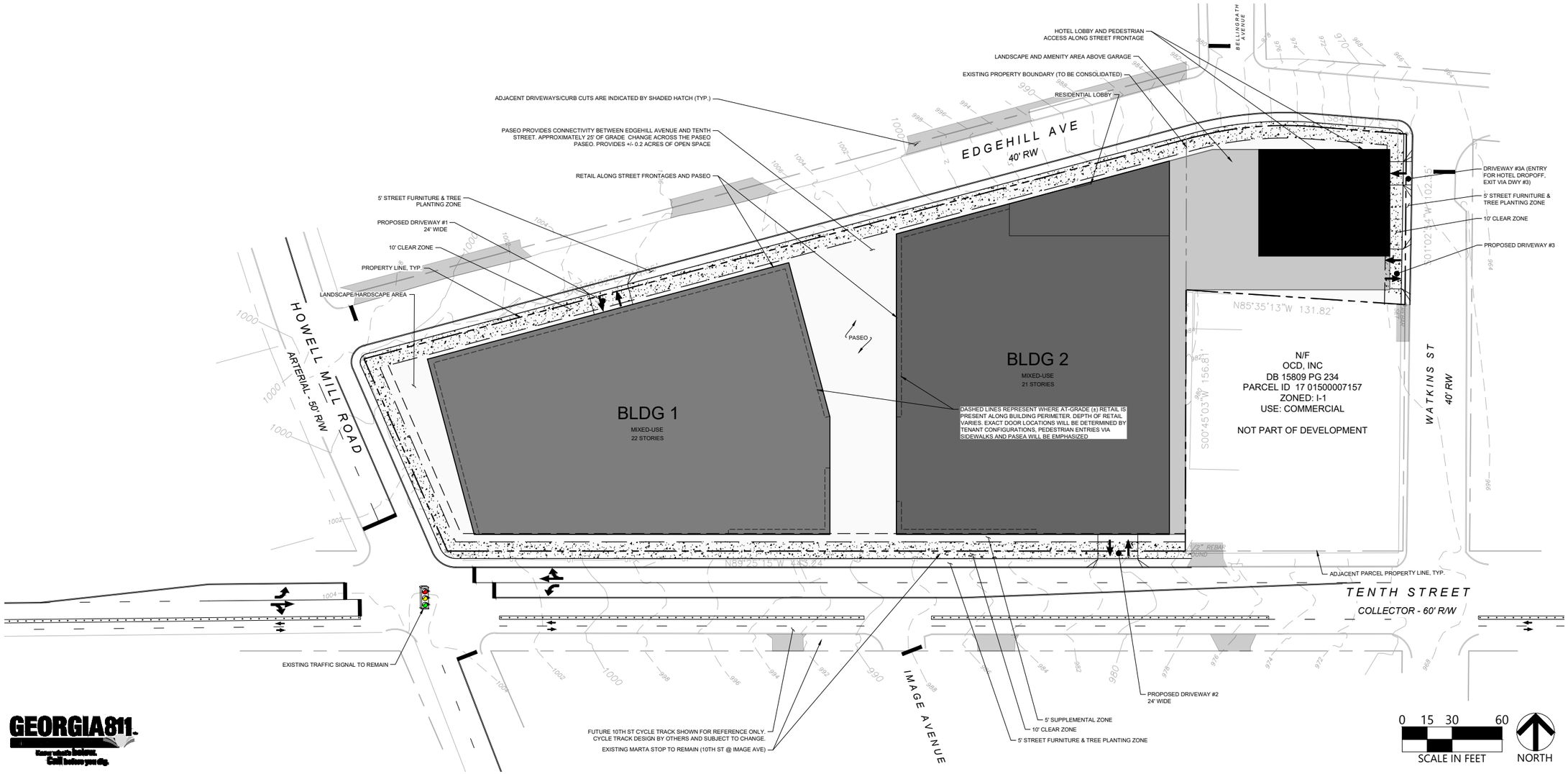
10TH ST CYCLE TRACK

THE UPPER WESTSIDE COMMUNITY IMPROVEMENT DISTRICT IS IMPLEMENTING A STREET IMPROVEMENT PROJECT CALLED "10TH STREET CYCLE TRACK" THAT IS EXPECTED TO BEGIN CONSTRUCTION IN THE NEAR FUTURE.

CONSTRUCTION PLANS DATED 3/23/2022 HAVE BEEN APPROVED BY ATLDOT AND OTHER STAKEHOLDERS. THE STREET DESIGN SHOWN BELOW (INCLUDING MEDIANS, STRIPING, MARKINGS, ETC.) ILLUSTRATES THE DESIGN INTENT OF THE 10TH STREET CYCLE TRACK PROJECT AND DOES NOT REFLECT EXISTING CONDITIONS.



VICINITY MAP
NTS



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Know what's below. Call before you dig.

BARCLIFT CONSULTING
Civil Engineering | Site Planning
404.771.0920
robert@barcliftconsulting.com
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Prepared By:

Prepared for:
ANiMAL

Project:
981 HOWELL MILL
981 HOWELL MILL RD | ATLANTA, GA 30318
PARCEL ID: 17 01500007155

Sheet Title:
DRI SITE PLAN

REVISION	
A	4/2/25

GEORGIA REGISTERED PROFESSIONAL ENGINEER ROBERT W. BARCLIFT 4/2/25

GSWCC LEVEL II #: 89269

March 2, 2025

Sheet Number:
C1

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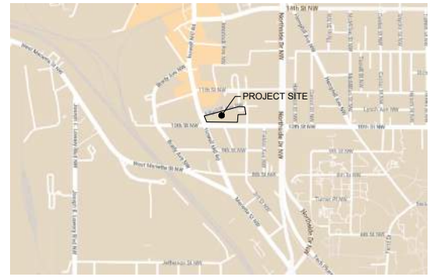

VICINITY MAP
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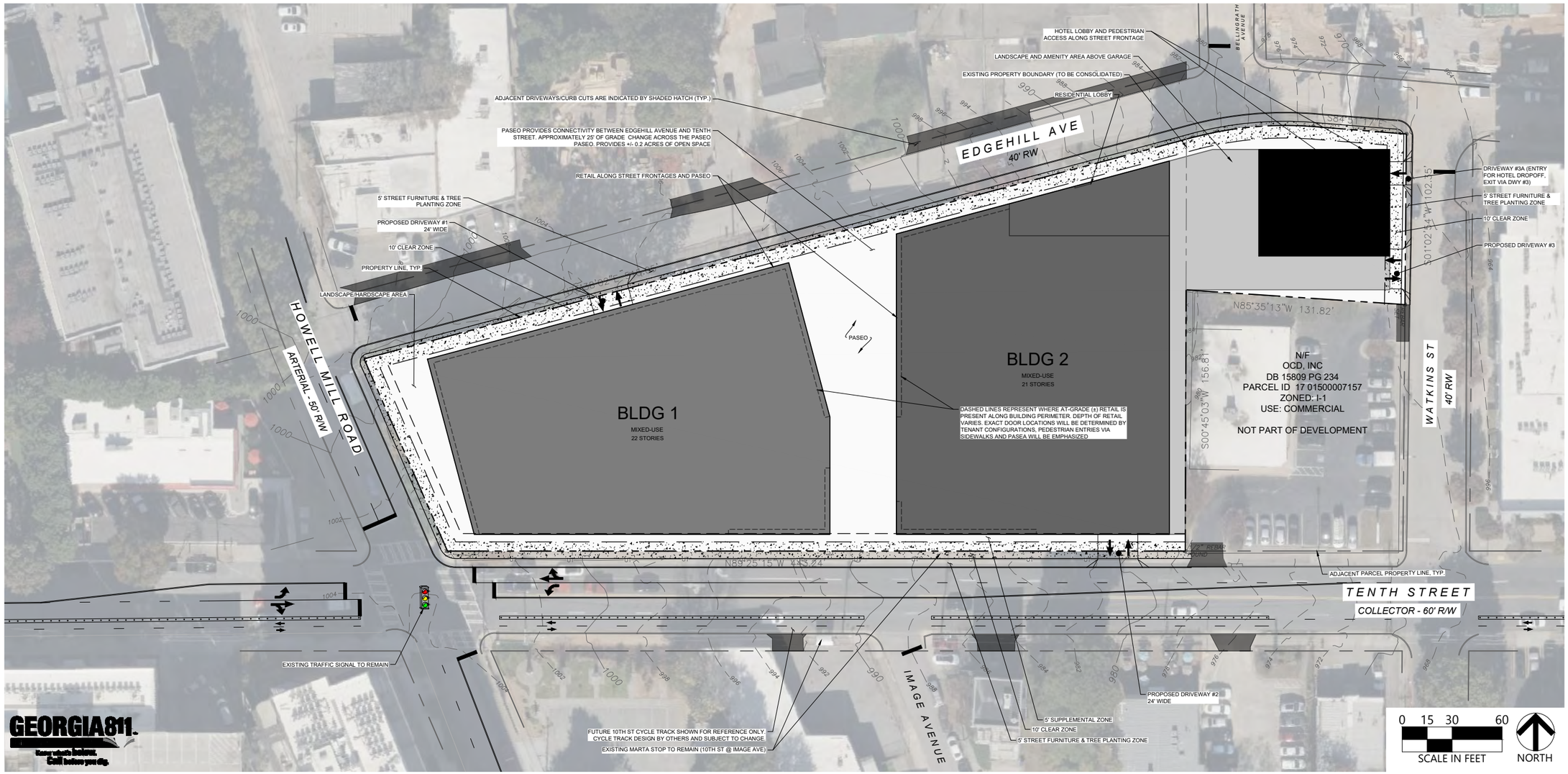

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PARCEL ID: 17 01500007155

Sheet Title:

REVISION	
A	4/2/25

GEORGIA REGISTERED PROFESSIONAL ENGINEER ROBERT W. BARCLIFT 4/7/25

GSWCC LEVEL II #: 89269

March 2, 2025

C1
Sheet Number

APPENDIX B

TRAFFIC COUNT DATA

Prepared by National Data & Surveying Services

Howell Mill Rd/Howell Mill Rd NW & 8th St NW

Peak Hour Turning Movement Count

ID: 25-180064-003
City: Atlanta

Day: Thursday
Date: 3/13/2025

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	662	0	1200
PHF	0.95		0.97

SOUTHBOUND — Howell Mill Rd/Howell Mill Rd NW

	Left	Thru	Right	U-Turn	Total	
AM	12	160	28	0	342	AM
NOON	0	0	0	0	0	NOON
PM	49	593	24	0	380	PM

EASTBOUND — 8th St NW

	AM	NOON	PM
Thru	48	0	112
U-Turn	0	0	0
Left	104	0	94
Right	64	0	58
Peds	5	0	7

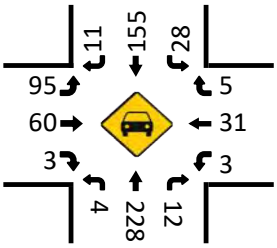
WESTBOUND — 8th St NW

	PM	NOON	AM
U-Turn	23	0	5
Left	60	0	32
Right	14	0	3
Thru	0	0	0
Peds	94	0	104

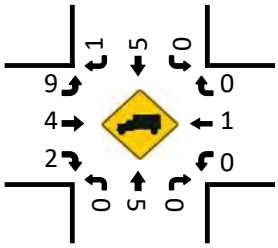
NORTHBOUND — Howell Mill Rd/Howell Mill Rd NW

	Peds	U-Turn	Left	Thru	Right	
PM	614	0	3	263	12	PM
NOON	0	0	0	0	0	NOON
AM	168	0	4	233	12	AM

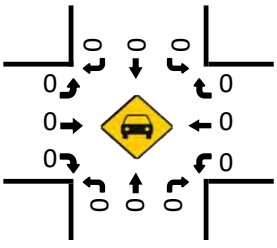
Cars (AM)



HT (AM)



Cars (NOON)



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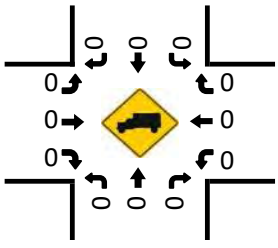
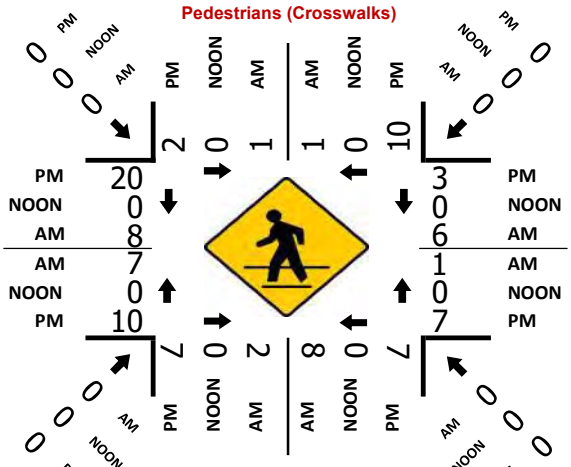


Pedestrians (Crosswalks)



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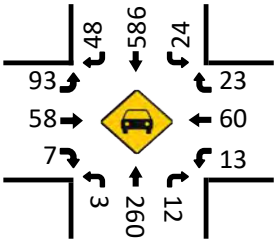

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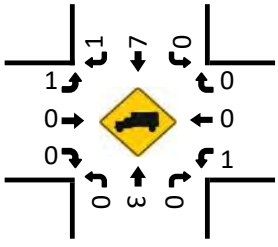


Prepared by National Data & Surveying Services

Howell Mill Rd & 14th St NW

Peak Hour Turning Movement Count

ID: 24-180094-009
City: Atlanta

Day: Tuesday
Date: 4/23/2024

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	4:00 PM - 06:00 PM

SOUTHBOUND (Howell Mill Rd)

AM	27	308	204	0	491	AM
NOON	0	0	0	0	0	NOON
PM	37	568	196	0	682	PM

EASTBOUND (14th St NW)

AM	NOON	PM		
62	0	96		
0	0	0	0	
12	0	31	0.5	
13	0	16	0.5	
3	0	8	1	

WESTBOUND (14th St NW)

	PM	NOON	AM
1	248	0	180
0.5	24	0	23
0.5	222	0	106
0	0	0	0
	311	0	333

NORTHBOUND (Howell Mill Rd)

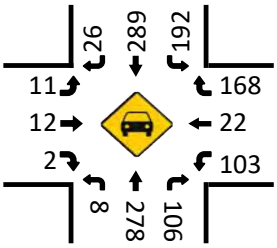
PM	798	0	35	403	99	PM
NOON	0	0	0	0	0	NOON
AM	417	0	12	299	116	AM

CONTROL			
Signalized			
TEV	1303 AM	0 NOON	1887 PM
PHF	0.96		0.96

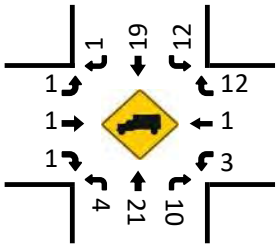
0 1 1 0

0 1 1 0

Cars (AM)



HT (AM)



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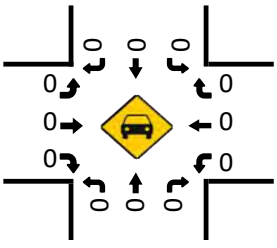

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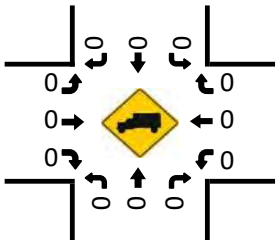

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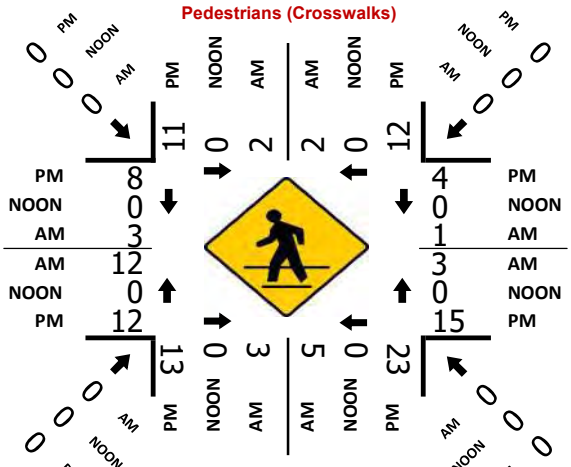
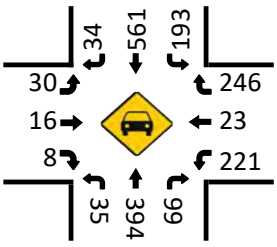


Cars (PM)



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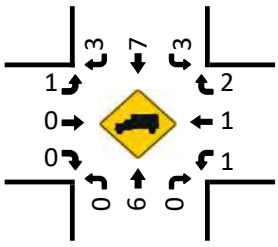

Prepared by National Data & Surveying Services

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08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	4:00 PM - 06:00 PM

CONTROL: Signalized

	1045 AM	0 NOON	1457 PM
TEV			
PHF	0.93		0.94

SOUTHBOUND (Howell Mill Rd)

AM	12	175	80	0	446	AM
NOON	0	0	0	0	0	NOON
PM	38	553	51	0	480	PM
	0	2	0	0		

EASTBOUND (10th St NW)

AM	NOON	PM	
112	0	181	
0	0	0	0
42	0	45	0
107	0	62	1
23	0	23	0
AM	NOON	PM	

WESTBOUND (10th St NW)

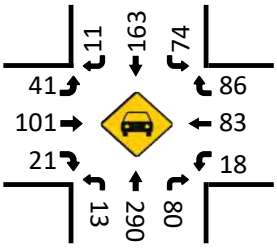
PM	NOON	AM	
120	0	96	1
128	0	87	0.5
67	0	18	0.5
0	0	0	0
153	0	271	
PM	NOON	AM	

NORTHBOUND (Howell Mill Rd)

PM	643	0	15	315	40	PM
NOON	0	0	0	0	0	NOON
AM	216	0	13	308	84	AM
		0	0	1	0	

Howell Mill Rd

Cars (AM)



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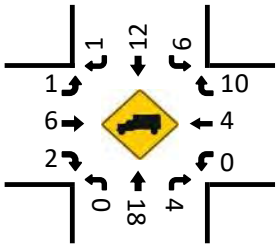

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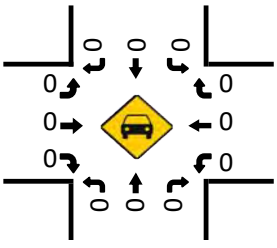

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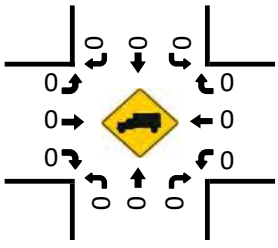

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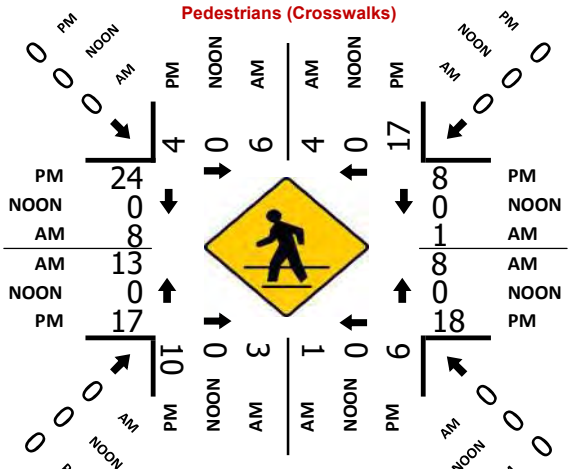

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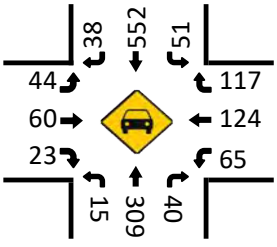
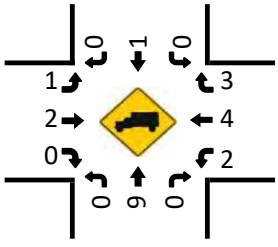


HT (PM)



Prepared by National Data & Surveying Services

Watkins St NW & 10th St NW

Peak Hour Turning Movement Count

ID: 24-180094-002
City: Atlanta

Day: Tuesday
Date: 4/23/2024

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Watkins St NW)

AM	3	5	3	0	50	AM
NOON	0	0	0	0	0	NOON
PM	8	7	6	0	45	PM

EASTBOUND (10th St NW)

AM	NOON	PM		
186	0	336	⇦	
0	0	0	↶	0
22	0	16	↱	0
203	0	127	→	2
10	0	6	↳	0

WESTBOUND (10th St NW)

PM	NOON	AM		
25	0	24	↰	0
321	0	177	←	2
26	0	17	↲	0
2	0	0	↷	0
178	0	272	⇨	

NORTHBOUND (Watkins St NW)

PM	39	0	7	4	43	PM
NOON	0	0	0	0	0	NOON
AM	32	0	6	4	66	AM

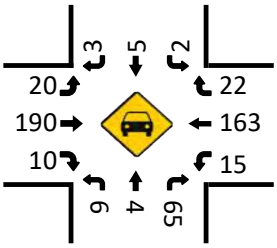
0	1	0	0
↶	↰	↑	↱
0	0	1	0

CONTROL

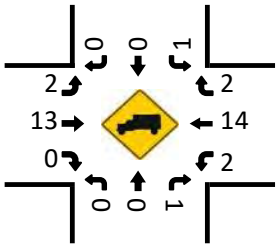
2-Way Stop(NB/SB)

	AM	NOON	PM
TEV	540	0	598
PHF	0.92		0.91

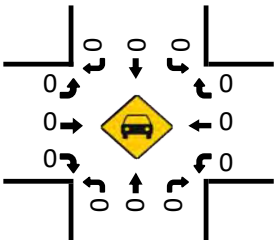
Cars (AM)



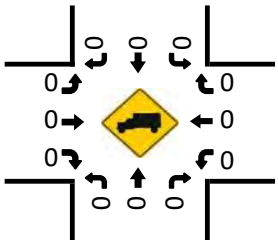
HT (AM)



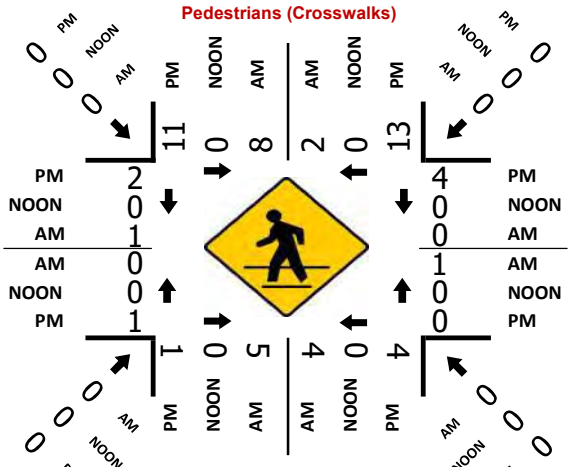
Cars (NOON)



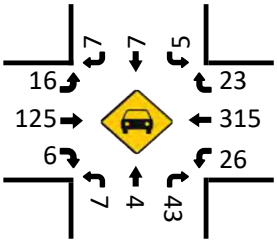
HT (NOON)



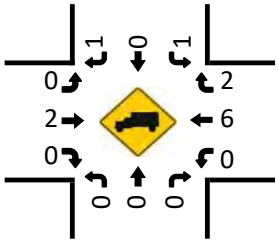
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Northside Dr NW & 10th St NW

Peak Hour Turning Movement Count

ID: 24-180094-003
City: Atlanta

Day: Tuesday
Date: 4/23/2024

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	4:00 PM - 06:00 PM

SOUTHBOUND (Northside Dr NW)

AM	48	930	125	4	1093	AM
NOON	0	0	0	0	0	NOON
PM	68	1234	67	10	1413	PM
	0	2	1	0		

EASTBOUND (10th St NW)

AM	NOON	PM	
203	0	386	
0	0	0	0
111	0	83	1
202	0	96	0.5
4	0	11	0.5
AM	NOON	PM	

WESTBOUND (10th St NW)

PM	NOON	AM	
22	0	34	0
178	0	111	2
200	0	85	1
0	0	0	0
425	0	686	
PM	NOON	AM	

NORTHBOUND (Northside Dr NW)

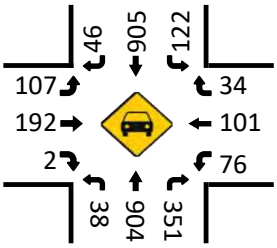
	0	1	3	1		
PM	1446	1	140	1298	262	PM
NOON	0	0	0	0	0	NOON
AM	1019	0	44	944	359	AM

CONTROL

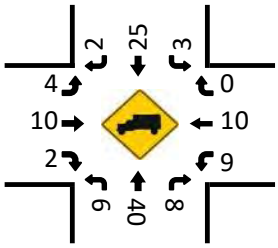
Signalized

TEV	3001 AM	0 NOON	3670 PM
PHF	0.96		0.98

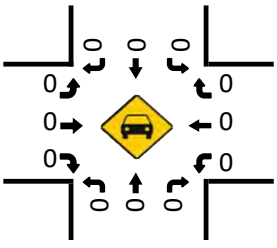
Cars (AM)



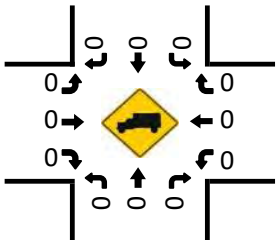
HT (AM)



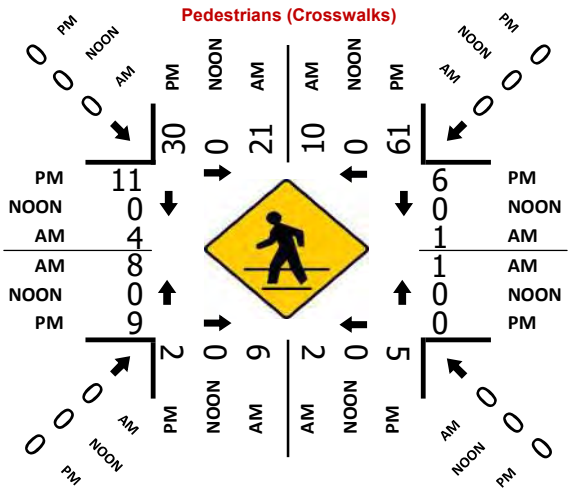
Cars (NOON)



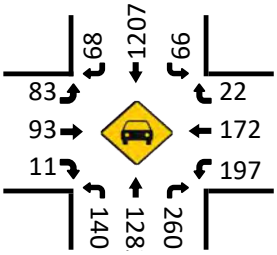
HT (NOON)



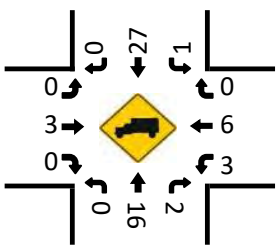
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Hemphill Ave NW & 10th St NW

Peak Hour Turning Movement Count

ID: 24-180094-004
City: Atlanta

Day: Tuesday
Date: 4/23/2024

PEAK HOURS

AM: 08:00 AM - 09:00 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 7:00 AM - 09:00 AM
NOON: NONE
PM: 4:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	1282	0	1432
PHF	0.89		0.96

SOUTHBOUND (Hemphill Ave NW)

AM	17	57	172	0	107	AM
NOON	0	0	0	0	0	NOON
PM	29	176	87	1	357	PM
	0	1	0	0		

EASTBOUND (10th St NW)

AM	NOON	PM	
271	0	347	
0	0	1	0
33	0	52	0
601	0	307	2
39	0	54	0

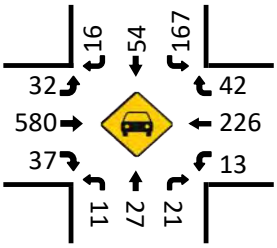
WESTBOUND (10th St NW)

	PM	NOON	AM
0	137	0	45
2	296	0	243
0	54	0	14
0	0	0	0
	443	0	794

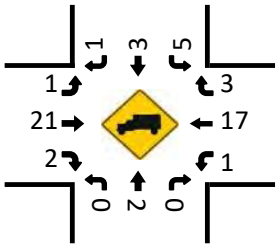
NORTHBOUND (Hemphill Ave NW)

PM	285	1	21	167	49	PM
NOON	0	0	0	0	0	NOON
AM	110	0	11	29	21	AM
		0	0	1	1	

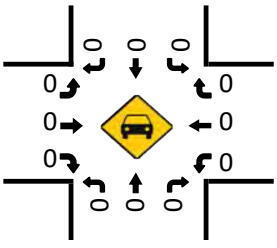
Cars (AM)



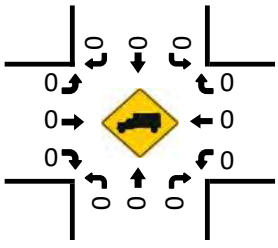
HT (AM)



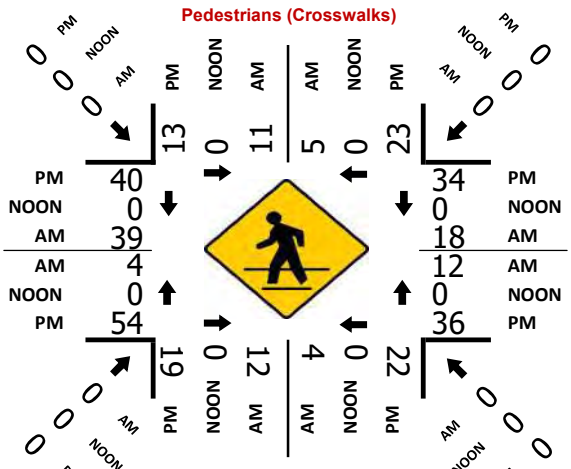
Cars (NOON)



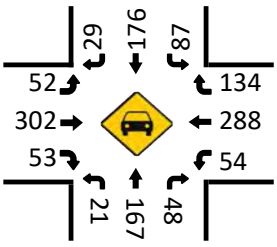
HT (NOON)



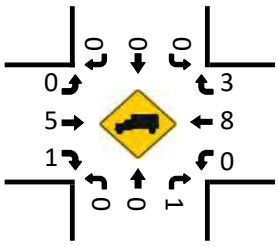
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Howell Mill Rd & Edgehill Ave NW

Peak Hour Turning Movement Count

ID: 24-180094-005
City: Atlanta

Day: Tuesday
Date: 4/23/2024

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	4:00 PM - 06:00 PM

SOUTHBOUND (Howell Mill Rd)

AM	0	264	5	0	443	AM
NOON	0	0	0	0	0	NOON
PM	0	629	4	0	480	PM

EASTBOUND (Edgehill Ave NW)

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
AM	NOON	PM	

WESTBOUND (Edgehill Ave NW)

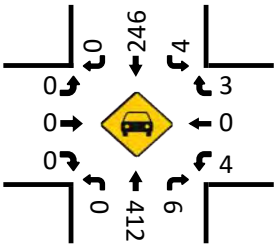
PM	NOON	AM	
7	0	4	0
0	0	0	1
7	0	5	0
0	0	0	0
12	0	13	
PM	NOON	AM	

NORTHBOUND (Howell Mill Rd)

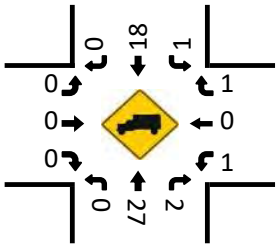
PM	636	0	0	473	8	PM
NOON	0	0	0	0	0	NOON
AM	269	0	0	439	8	AM

CONTROL			
1-Way Stop(WB)			
TEV	725 AM	0 NOON	1128 PM
PHF	0.93		0.95

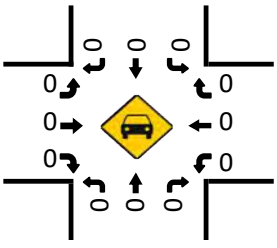
Cars (AM)



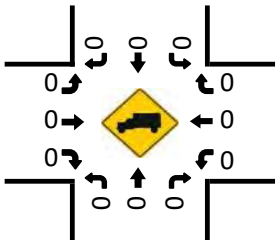
HT (AM)



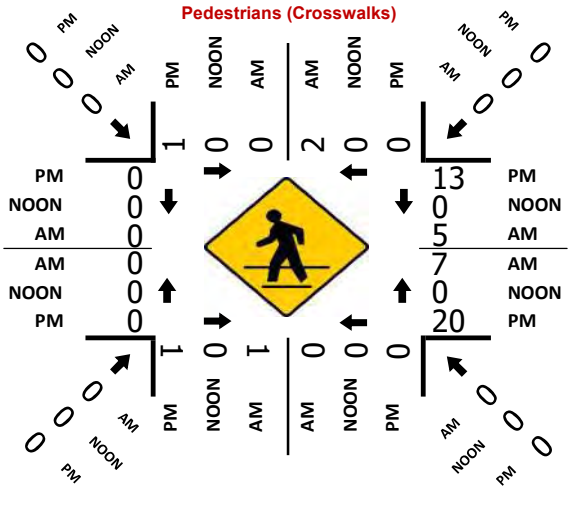
Cars (NOON)



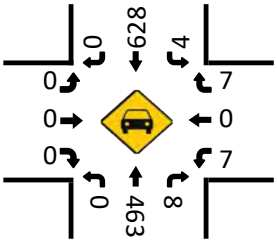
HT (NOON)



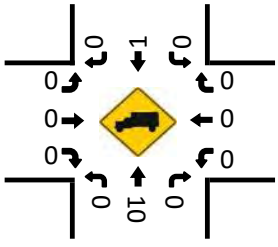
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Howell Mill Rd & 11th St NW

Peak Hour Turning Movement Count

ID: 24-180094-006
City: Atlanta

Day: Tuesday
Date: 4/23/2024

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:45 PM - 05:45 PM	4:00 PM - 06:00 PM

SOUTHBOUND — Howell Mill Rd

AM	5	251	38	0	402	AM
NOON	0	0	0	0	0	NOON
PM	21	570	56	1	473	PM

EASTBOUND — 11th St NW

AM	NOON	PM	
16	0	47	
0	0	0	0
17	0	21	0
27	0	31	1
5	0	22	0
AM	NOON	PM	

WESTBOUND — 11th St NW

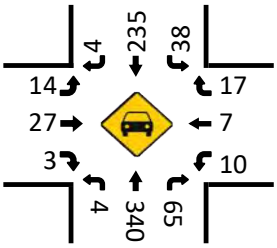
PM	NOON	AM	
35	0	19	0
15	0	7	1
34	0	11	0
0	0	0	0
136	0	132	
PM	NOON	AM	

NORTHBOUND — Howell Mill Rd

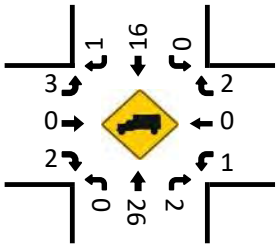
PM	626	0	11	416	49	PM
NOON	0	0	0	0	0	NOON
AM	267	0	4	366	67	AM

CONTROL			
2-Way Stop(EB/WB)			
TEV	817 AM	0 NOON	1282 PM
PHF	0.94		0.99

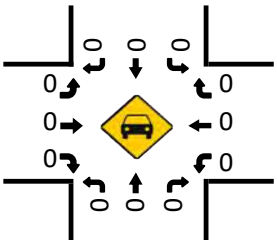
Cars (AM)



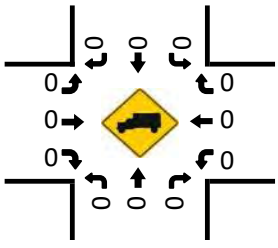
HT (AM)



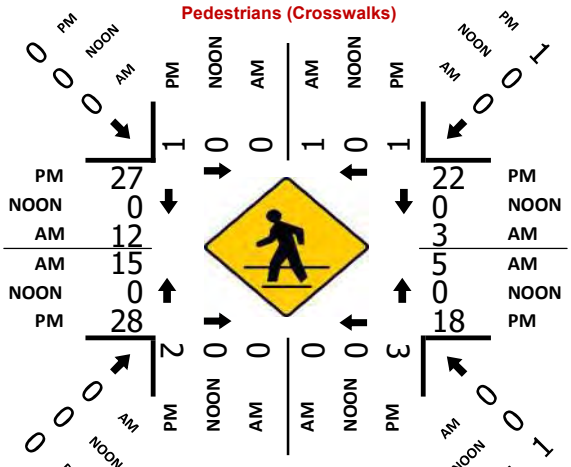
Cars (NOON)



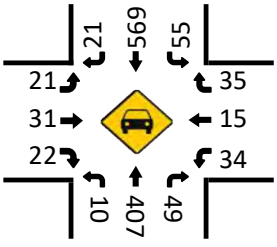
HT (NOON)



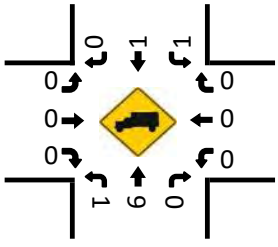
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Bellingrath Ave NW & 11th St NW

Peak Hour Turning Movement Count

ID: 24-180094-007
City: Atlanta

Day: Tuesday
Date: 4/23/2024

PEAK HOURS

AM	08:00 AM - 09:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS

AM	7:00 AM - 09:00 AM
NOON	NONE
PM	4:00 PM - 06:00 PM

SOUTHBOUND (Bellingrath Ave NW)

AM	0	0	2	0	1	AM
NOON	0	0	0	0	0	NOON
PM	0	1	3	0	0	PM

EASTBOUND (11th St NW)

AM	NOON	PM	
32	0	52	⇦
0	0	0	↶ 0
0	0	0	↱ 0
120	0	140	→ 1
4	0	8	↴ 0
AM	NOON	PM	

WESTBOUND (11th St NW)

PM	NOON	AM	
0	0	1	↰ 0
43	0	25	← 1
9	0	7	↰ 0
0	0	0	↰ 0
192	0	158	⇨
PM	NOON	AM	

NORTHBOUND (Bellingrath Ave NW)

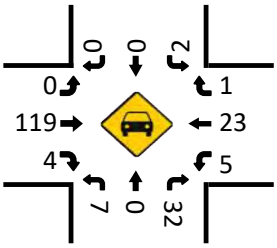
PM	18	0	9	0	49	PM
NOON	0	0	0	0	0	NOON
AM	12	1	7	0	36	AM

CONTROL

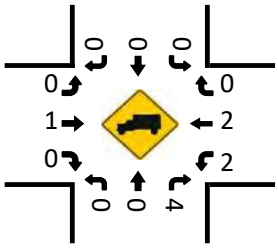
1-Way Stop(NB)

	AM	NOON	PM
TEV	203	0	262
PHF	0.71		0.83

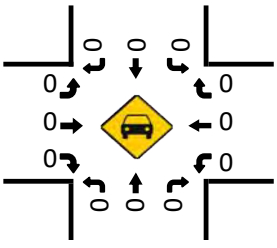
Cars (AM)



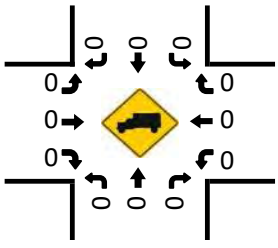
HT (AM)



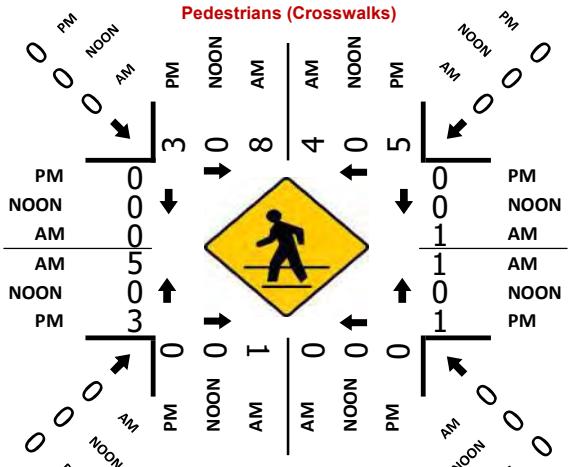
Cars (NOON)



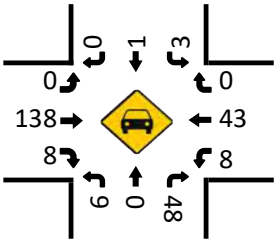
HT (NOON)



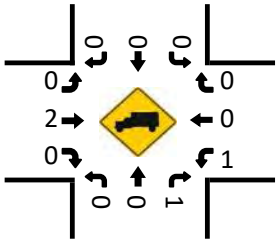
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Northside Dr NW & 11th St NW

Peak Hour Turning Movement Count

ID: 24-180094-008
City: Atlanta

Day: Tuesday
Date: 4/23/2024

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	4:00 PM - 06:00 PM

SOUTHBOUND (Northside Dr NW)

AM	47	1037	12	13	1179	AM
NOON	0	0	0	0	0	NOON
PM	58	1330	16	11	1549	PM

EASTBOUND (11th St NW)

AM	NOON	PM	
49	0	63	
0	0	0	0
56	0	92	1
0	0	5	1
50	0	72	0
AM	NOON	PM	

WESTBOUND (11th St NW)

PM	NOON	AM	
32	0	7	0
1	0	0	1
4	0	2	0
0	0	0	0
45	0	24	
PM	NOON	AM	

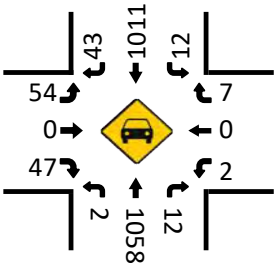
NORTHBOUND (Northside Dr NW)

PM	1406	0	4	1414	24	PM
NOON	0	0	0	0	0	NOON
AM	1089	0	2	1103	12	AM

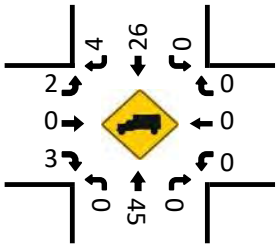
0	2	0	0
0	0	2	0

CONTROL			
Signalized			
TEV	2341 AM	0 NOON	3063 PM
PHF	0.92		0.93

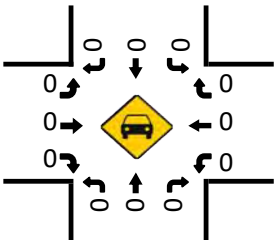
Cars (AM)



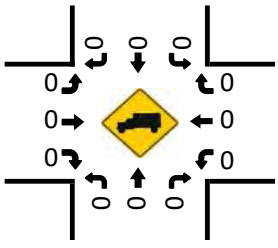
HT (AM)



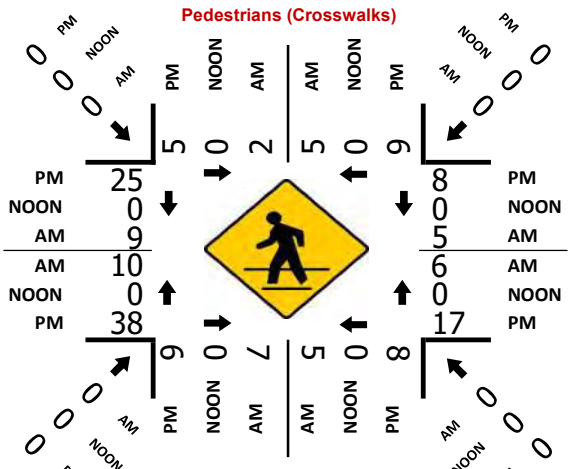
Cars (NOON)



HT (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
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0
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Prepared by National Data & Surveying Services

SR 3/US 41/Northside Dr NW & 14th St NW

Peak Hour Turning Movement Count

ID: 25-180064-006
City: Atlanta

Day: Thursday
Date: 3/13/2025

PEAK HOURS

AM: 08:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 05:00 PM

COUNT PERIODS

AM: 7:00 AM - 09:00 AM
NOON: NONE
PM: 4:00 PM - 06:00 PM

SOUTHBOUND — SR 3/US 41/Northside Dr NW

AM	50	827	4	0	992	AM
NOON	0	0	0	0	0	NOON
PM	97	904	8	1	1256	PM

EASTBOUND — 14th St NW

AM	NOON	PM		
393	0	545		
1	0	0	0	
66	0	66	0	
297	0	206	2	
50	0	54	0	
AM	NOON	PM		

WESTBOUND — 14th St NW

PM	NOON	AM		
25	0	5	0	
375	0	288	2	
206	0	149	0	
0	0	0	0	
301	0	366		
PM	NOON	AM		

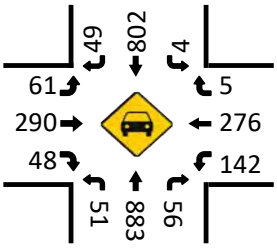
NORTHBOUND — SR 3/US 41/Northside Dr NW

PM	1165	1	73	1164	87	PM
NOON	0	0	0	0	0	NOON
AM	1026	0	54	921	65	AM

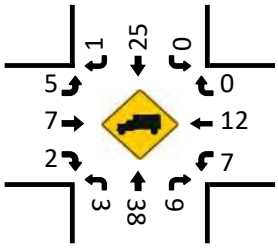
	0	2	1	0
	0	1	2	0

CONTROL			
Signalized			
TEV	2777 AM	0 NOON	3267 PM
PHF	0.99		0.93

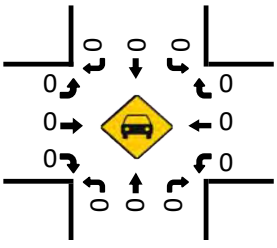
Cars (AM)



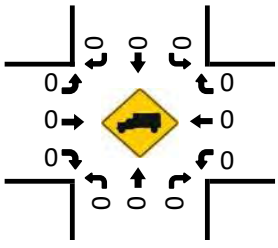
HT (AM)



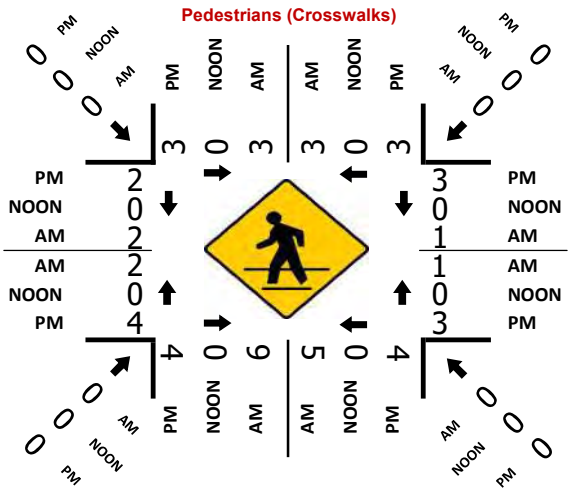
Cars (NOON)



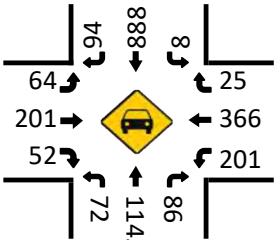
HT (NOON)



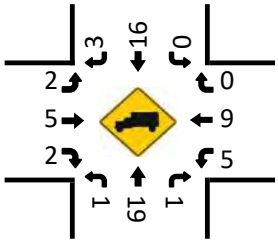
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



Prepared by National Data & Surveying Services

Hemphill Ave NW & 14th St NW

Peak Hour Turning Movement Count

ID: 25-180064-005
City: Atlanta

Day: Thursday
Date: 3/13/2025

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	4:00 PM - 06:00 PM

CONTROL: Signalized

	1130 AM	0 NOON	1441 PM
PHF	0.96		0.97

SOUTHBOUND (Hemphill Ave NW)

AM	0	136	82	0	76	AM
NOON	0	0	0	0	0	NOON
PM	0	136	25	0	249	PM
	0	1	1	0		

EASTBOUND (14th St NW)

AM	NOON	PM	
441	0	654	
0	0	0	0
5	0	4	0
292	0	239	2
71	0	78	0
AM	NOON	PM	

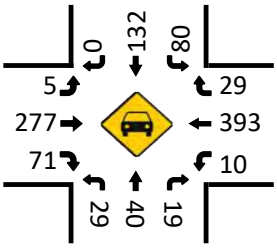
WESTBOUND (14th St NW)

PM	NOON	AM	
71	0	31	0
604	0	412	2
28	0	11	0
0	0	0	0
296	0	395	
PM	NOON	AM	

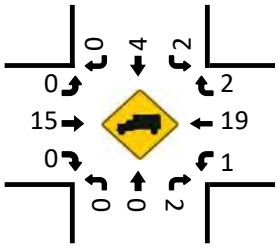
NORTHBOUND (Hemphill Ave NW)

PM	242	0	50	174	32	PM
NOON	0	0	0	0	0	NOON
AM	218	0	29	40	21	AM
		0	0	1	1	

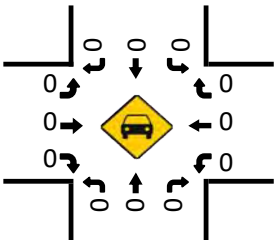
Cars (AM)



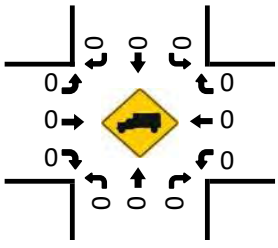
HT (AM)



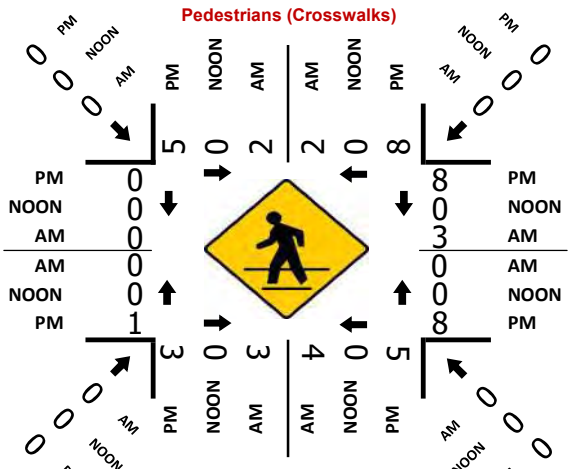
Cars (NOON)



HT (NOON)



Pedestrians (Crosswalks)


PM
NOON
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Prepared by National Data & Surveying Services

SR 3/US 41/Northside Dr NW & Hemphill Ave NW

Peak Hour Turning Movement Count

ID: 25-180064-004
City: Atlanta

Day: Thursday
Date: 3/13/2025

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	7:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	4:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	2166	0	2703
PHF	0.98		0.93

SOUTHBOUND — SR 3/US 41/Northside Dr NW

AM	0	882	218	0	1066	AM
NOON	0	0	0	0	0	NOON
PM	0	1013	172	0	1518	PM
	0	1.5	1.5	0		

EASTBOUND — Hemphill Ave NW

AM	NOON	PM	
0	0	0	
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
AM	NOON	PM	

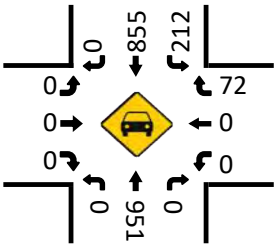
WESTBOUND — Hemphill Ave NW

PM	NOON	AM	
256	0	74	0
0	0	0	2
0	0	0	0
0	0	0	0
172	0	218	
PM	NOON	AM	

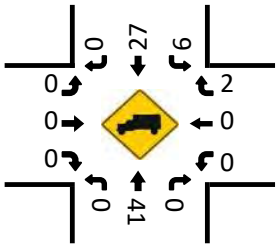
NORTHBOUND — SR 3/US 41/Northside Dr NW

PM	1013	0	0	1262	0	PM
NOON	0	0	0	0	0	NOON
AM	882	0	0	992	0	AM
		0	0	2	0	

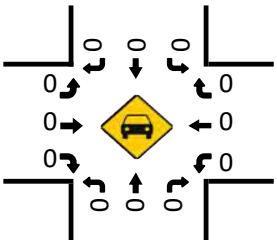
Cars (AM)



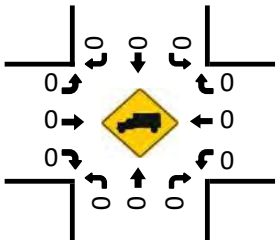
HT (AM)



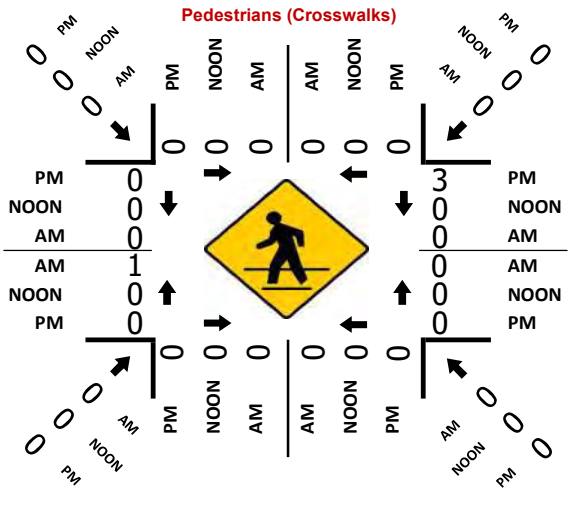
Cars (NOON)



HT (NOON)



Pedestrians (Crosswalks)


PM
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Prepared by National Data & Surveying Services

Howell Mill Rd/Howell Mill Rd NW & Huff Rd NW/Hemphill Ave NW

Peak Hour Turning Movement Count

ID: 25-180064-001
City: Atlanta

Day: Thursday
Date: 3/13/2025

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NONE	NONE
05:00 PM - 06:00 PM	4:00 PM - 06:00 PM

SOUTHBOUND — Howell Mill Rd/Howell Mill Rd NW

AM	214	244	0	0	552	AM
NOON	0	0	0	0	0	NOON
PM	233	504	2	0	645	PM

EASTBOUND — Huff Rd NW/Hemphill Ave NW

AM	NOON	PM		
405	0	464		
0	0	0	0	
317	0	246	0	
1	0	1	1	
285	0	218	0	
AM	NOON	PM		

WESTBOUND — Huff Rd NW/Hemphill Ave NW

	PM	NOON	AM
0	8	0	3
1	9	0	1
0	3	0	2
0	0	0	0
	12	0	3
	PM	NOON	AM

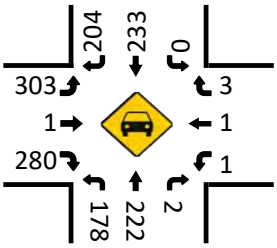
NORTHBOUND — Howell Mill Rd/Howell Mill Rd NW

PM	725	0	222	391	9	PM
NOON	0	0	0	0	0	NOON
AM	531	0	190	232	2	AM

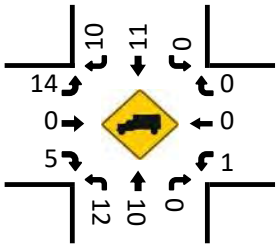
	0	2	0	0
	0	1	1	0

CONTROL			
Signalized			
TEV	1491 AM	0 NOON	1846 PM
PHF	0.93		0.96

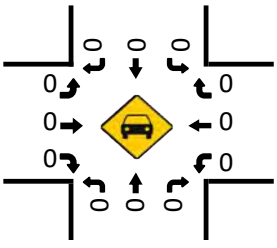
Cars (AM)



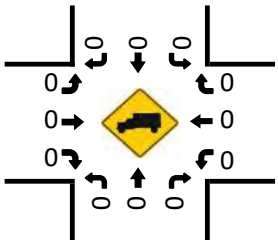
HT (AM)



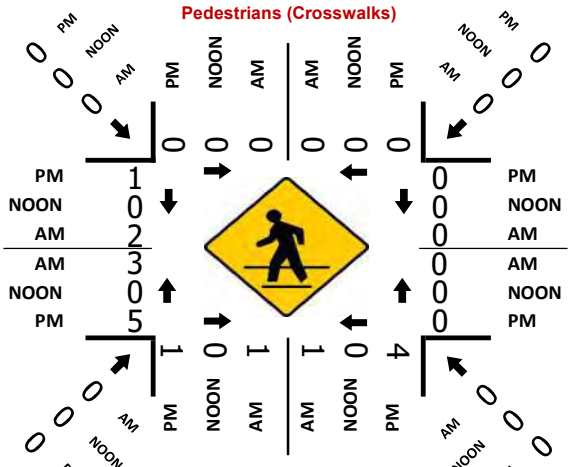
Cars (NOON)



HT (NOON)



Pedestrians (Crosswalks)


PM
NOON
AM
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PM
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Prepared by National Data & Surveying Services

Howell Mill Rd/Howell Mill Rd NW & 17th St NW

Peak Hour Turning Movement Count

ID: 25-180064-002
City: Atlanta

Day: Thursday
Date: 3/13/2025

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 05:00 PM - 06:00 PM

COUNT PERIODS

AM: 7:00 AM - 09:00 AM
NOON: NONE
PM: 4:00 PM - 06:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	1311	0	1701
PHF	0.98		0.92

SOUTHBOUND — Howell Mill Rd/Howell Mill Rd NW

AM	0	296	227	0	362	AM
NOON	0	0	0	0	0	NOON
PM	0	475	154	0	607	PM

Turning movements: 0 | 2 | 0 | 0

EASTBOUND — 17th St NW

	AM	NOON	PM
	0	0	0
	0	0	0
	0	0	0
	0	0	0
	0	0	0

Turning movements: 0 | 0 | 0 | 0

WESTBOUND — 17th St NW

	PM	NOON	AM
	177	0	75
	0	0	0
	250	0	155
	0	0	0
	369	0	498

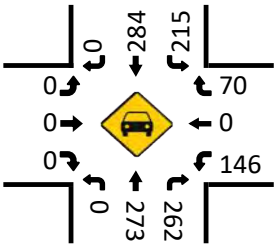
Turning movements: 0 | 1 | 0 | 0

NORTHBOUND — Howell Mill Rd/Howell Mill Rd NW

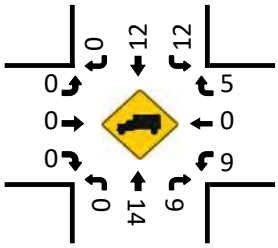
PM	725	0	0	430	215	PM
NOON	0	0	0	0	0	NOON
AM	451	0	0	287	271	AM

Turning movements: 0 | 0 | 1 | 0

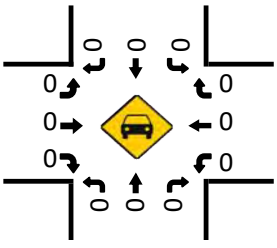
Cars (AM)



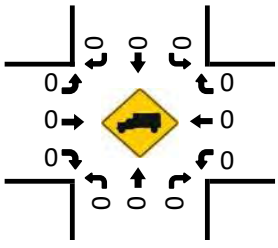
HT (AM)



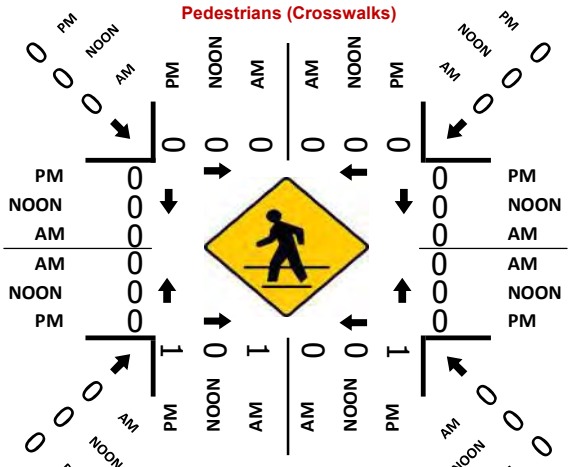
Cars (NOON)



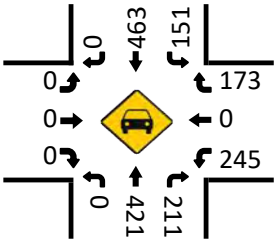
HT (NOON)



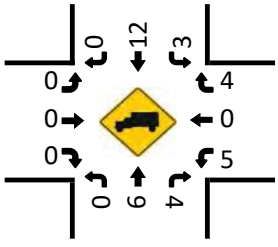
Pedestrians (Crosswalks)



Cars (PM)

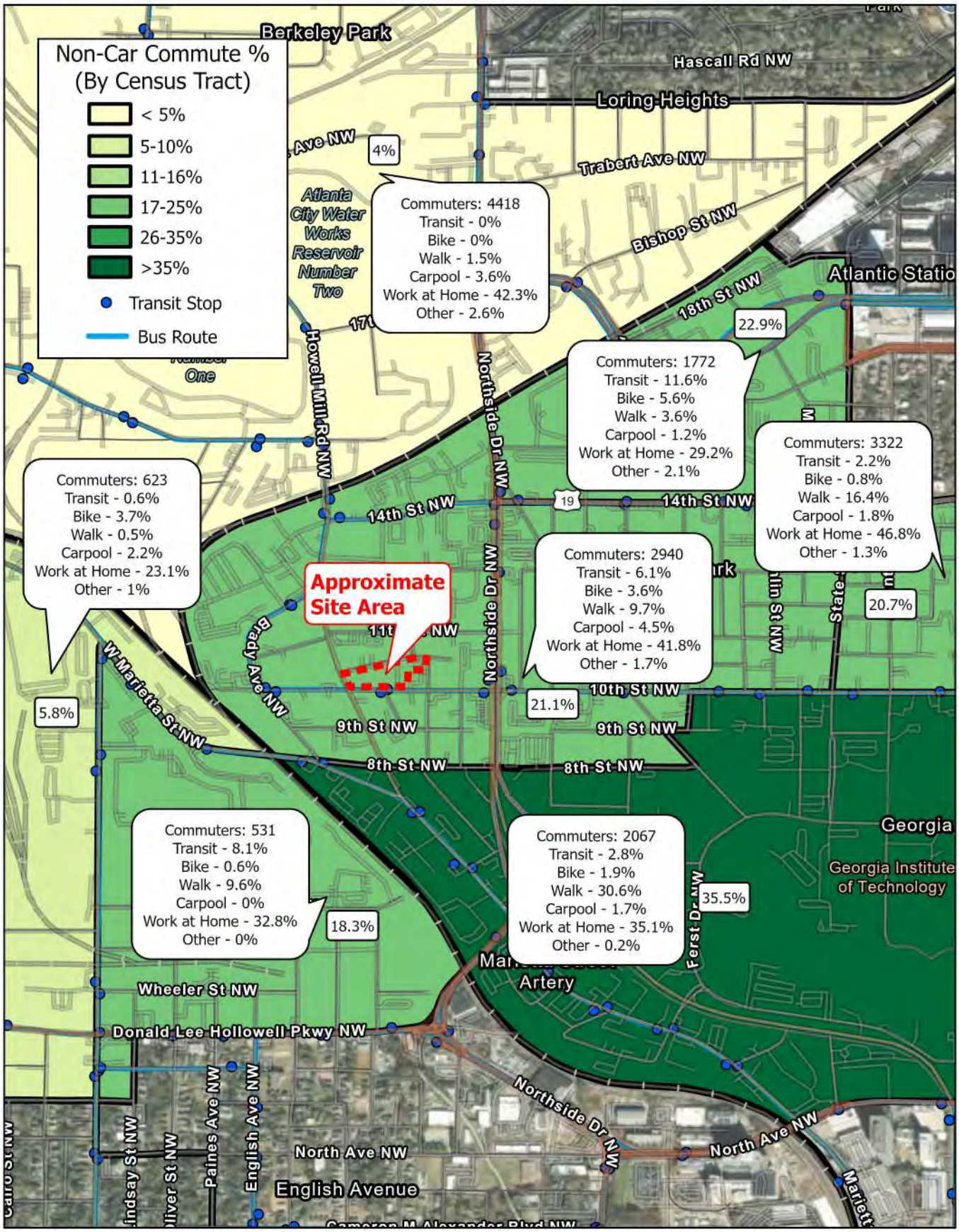


HT (PM)



APPENDIX C

US CENSUS DATA & GROWTH RATE


Non-Car Commute %
(By Census Tract)
< 5%
5-10%
11-16%
17-25%
26-35%
>35%
Transit Stop
Bus Route
Berkeley Park
Hascall Rd NW
Loring Heights
Trabert Ave NW
Bishop St NW
Atlanta City Water Works Reservoir Number Two
4%
Commuters: 4418
Transit - 0%
Bike - 0%
Walk - 1.5%
Carpool - 3.6%
Work at Home - 42.3%
Other - 2.6%
Atlantic Statio
18th St NW
22.9%
Commuters: 1772
Transit - 11.6%
Bike - 5.6%
Walk - 3.6%
Carpool - 1.2%
Work at Home - 29.2%
Other - 2.1%
Commuters: 3322
Transit - 2.2%
Bike - 0.8%
Walk - 16.4%
Carpool - 1.8%
Work at Home - 46.8%
Other - 1.3%
20.7%
Howell Mill Rd NW
Northside Dr NW
14th St NW
19
Commuters: 623
Transit - 0.6%
Bike - 3.7%
Walk - 0.5%
Carpool - 2.2%
Work at Home - 23.1%
Other - 1%
Approximate Site Area
Commuters: 2940
Transit - 6.1%
Bike - 3.6%
Walk - 9.7%
Carpool - 4.5%
Work at Home - 41.8%
Other - 1.7%
10th St NW
21.1%
5.8%
W Marietta St NW
Brady Ave NW
9th St NW
8th St NW
Commuters: 531
Transit - 8.1%
Bike - 0.6%
Walk - 9.6%
Carpool - 0%
Work at Home - 32.8%
Other - 0%
18.3%
Commuters: 2067
Transit - 2.8%
Bike - 1.9%
Walk - 30.6%
Carpool - 1.7%
Work at Home - 35.1%
Other - 0.2%
35.5%
Georgia
Georgia Institute of Technology
Ferst Dr NW
Artery
Wheeler St NW
Donald Lee Hollowell Pkwy NW
Northside Dr NW
North Ave NW
Paines Ave NW
English Ave NW
English Avenue

981 Howell Mill DRI - Growth Rate Calculation Worksheet

Percentage Growth										
Roadway	**County**	**Traffic Count Station**	**2018 Traffic Volumes**	**2019 Traffic Volumes**	**2020 Traffic Volumes**	**2021 Traffic Volumes**	**2022 Traffic Volumes**	**2024 Traffic Volumes by Linear Regress.**	**2027 Traffic Volumes by Linear Regress.**	**Annual Growth 2023 to 2025**
14th Street	Fulton	121-5633	14,900	14,900	11,900	14,800	15,100	14,440	14,530	0.2%
Northside Drive	Fulton	121-5018	31,400	33,500	30,900	31,700	33,000	32,660	33,080	0.4%
		Weighted Average	**46,300**	**48,400**	**42,800**	**46,500**	**48,100**	**47,100**	**47,610**	**0.4%**

APPENDIX D

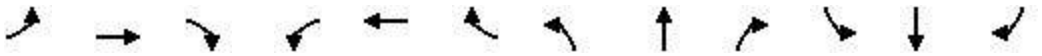
EXISTING, NO-BUILD, & BUILD SYNCHRO REPORTS

2025 EXISTING SYNCHRO REPORTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	64	5	3	32	5	4	233	12	28	160	12
Future Volume (veh/h)	104	64	5	3	32	5	4	233	12	28	160	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1811	1307	1900	1856	1900	1900	1870	1900	1900	1856	1781
Adj Flow Rate, veh/h	116	71	6	4	45	7	4	240	12	38	216	16
Peak Hour Factor	0.90	0.90	0.90	0.71	0.71	0.71	0.97	0.97	0.97	0.74	0.74	0.74
Percent Heavy Veh, %	9	6	40	0	3	0	0	2	0	0	3	8
Cap, veh/h	179	85	7	38	226	33	37	1322	65	347	1982	150
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.75	0.75	0.75	1.00	1.00	1.00
Sat Flow, veh/h	893	581	47	42	1543	227	8	1754	87	409	2630	199
Grp Volume(v), veh/h	193	0	0	56	0	0	256	0	0	137	0	133
Grp Sat Flow(s),veh/h/ln	1521	0	0	1812	0	0	1850	0	0	1586	0	1653
Q Serve(g_s), s	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.8	0.0	0.0	3.3	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.60		0.03	0.07		0.12	0.02		0.05	0.28		0.12
Lane Grp Cap(c), veh/h	271	0	0	297	0	0	1424	0	0	1234	0	1246
V/C Ratio(X)	0.71	0.00	0.00	0.19	0.00	0.00	0.18	0.00	0.00	0.11	0.00	0.11
Avail Cap(c_a), veh/h	410	0	0	465	0	0	1424	0	0	1234	0	1246
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	49.8	0.0	0.0	45.1	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.0	0.0	0.3	0.0	0.0	0.3	0.0	0.0	0.2	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	0.0	1.5	0.0	0.0	1.6	0.0	0.0	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.3	0.0	0.0	45.4	0.0	0.0	4.5	0.0	0.0	0.2	0.0	0.2
LnGrp LOS	D			D			A			A		A
Approach Vol, veh/h		193			56			256			270	
Approach Delay, s/veh		53.3			45.4			4.5			0.2	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		96.4		23.6		96.4		23.6				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		79.0		29.0		79.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0		5.3		6.7		16.8				
Green Ext Time (p_c), s		1.7		0.2		1.6		0.8				

Intersection Summary	
HCM 7th Control Delay, s/veh	18.1
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	107	23	18	87	96	13	308	84	80	175	12
Future Volume (veh/h)	42	107	23	18	87	96	13	308	84	80	175	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1811	1767	1900	1826	1752	1900	1811	1826	1781	1796	1781
Adj Flow Rate, veh/h	50	127	27	22	109	120	14	335	91	93	203	14
Peak Hour Factor	0.84	0.84	0.84	0.80	0.80	0.80	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	2	6	9	0	5	10	0	6	5	8	7	8
Cap, veh/h	79	161	31	62	262	258	919	996	271	725	1206	83
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	239	928	178	157	1505	1485	1183	1371	373	916	1661	115
Grp Volume(v), veh/h	204	0	0	131	0	120	14	0	426	93	0	217
Grp Sat Flow(s),veh/h/ln	1345	0	0	1663	0	1485	1183	0	1744	916	0	1776
Q Serve(g_s), s	10.5	0.0	0.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	18.2	0.0	0.0	7.7	0.0	8.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.25		0.13	0.17		1.00	1.00		0.21	1.00		0.06
Lane Grp Cap(c), veh/h	271	0	0	324	0	258	919	0	1266	725	0	1289
V/C Ratio(X)	0.75	0.00	0.00	0.40	0.00	0.46	0.02	0.00	0.34	0.13	0.00	0.17
Avail Cap(c_a), veh/h	376	0	0	438	0	359	919	0	1266	725	0	1289
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.8	0.0	0.0	44.1	0.0	44.5	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.4	0.0	0.0	0.8	0.0	1.3	0.0	0.0	0.2	0.4	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	0.0	3.5	0.0	3.3	0.0	0.0	0.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.3	0.0	0.0	44.9	0.0	45.8	0.0	0.0	0.2	0.4	0.0	0.3
LnGrp LOS	D			D		D	A		A	A		A
Approach Vol, veh/h		204			251			440			310	
Approach Delay, s/veh		54.3			45.4			0.1			0.3	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		93.1		26.9		93.1		26.9				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		79.0		29.0		79.0		29.0				
Max Q Clear Time (g_c+I1), s		2.0		20.2		2.0		10.7				
Green Ext Time (p_c), s		1.9		0.7		3.0		1.0				

Intersection Summary												
HCM 7th Control Delay, s/veh		18.8										
HCM 7th LOS		B										

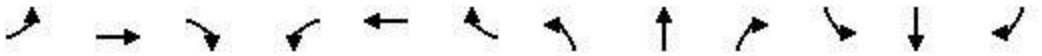
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	203	10	17	177	24	6	4	66	3	5	3
Future Vol, veh/h	22	203	10	17	177	24	6	4	66	3	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	88	88	88	86	86	86	46	46	46
Heavy Vehicles, %	9	6	0	12	8	8	0	0	2	33	0	0
Mvmt Flow	27	251	12	19	201	27	7	5	77	7	11	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	228	0	0	263	0	0	456	578	131	435	571	114
Stage 1	-	-	-	-	-	-	311	311	-	253	253	-
Stage 2	-	-	-	-	-	-	145	267	-	182	317	-
Critical Hdwy	4.28	-	-	4.34	-	-	7.5	6.5	6.94	8.16	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7.16	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7.16	5.5	-
Follow-up Hdwy	2.29	-	-	2.32	-	-	3.5	4	3.32	3.83	4	3.3
Pot Cap-1 Maneuver	1287	-	-	1229	-	-	493	429	894	438	434	923
Stage 1	-	-	-	-	-	-	680	662	-	648	701	-
Stage 2	-	-	-	-	-	-	849	692	-	720	658	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1287	-	-	1229	-	-	458	413	894	380	417	923
Mov Cap-2 Maneuver	-	-	-	-	-	-	458	413	-	380	417	-
Stage 1	-	-	-	-	-	-	664	647	-	637	689	-
Stage 2	-	-	-	-	-	-	816	680	-	638	643	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.86	0.71	10.16	12.97
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	786	316	-	-	241	-	-	475
HCM Lane V/C Ratio	0.112	0.021	-	-	0.016	-	-	0.05
HCM Ctrl Dly (s/v)	10.2	7.9	0.1	-	8	0.1	-	13
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	202	4	85	111	34	44	944	359	129	930	48
Future Volume (veh/h)	111	202	4	85	111	34	44	944	359	129	930	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1159	1737	1767	1900	1693	1841	1870	1870	1856	1841
Adj Flow Rate, veh/h	113	206	4	89	116	35	47	1004	0	133	959	49
Peak Hour Factor	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.97	0.97	0.97
Percent Heavy Veh, %	4	5	50	11	9	0	14	4	2	2	3	4
Cap, veh/h	271	239	5	171	313	91	329	2970		406	2069	106
Arrive On Green	0.07	0.13	0.13	0.06	0.12	0.12	0.03	0.59	0.00	0.05	0.61	0.61
Sat Flow, veh/h	1753	1785	35	1654	2564	746	1612	5025	1585	1781	3413	174
Grp Volume(v), veh/h	113	0	210	89	74	77	47	1004	0	133	495	513
Grp Sat Flow(s),veh/h/ln	1753	0	1820	1654	1678	1632	1612	1675	1585	1781	1763	1824
Q Serve(g_s), s	7.8	0.0	15.8	6.4	5.7	6.0	1.5	14.3	0.0	4.1	21.6	21.6
Cycle Q Clear(g_c), s	7.8	0.0	15.8	6.4	5.7	6.0	1.5	14.3	0.0	4.1	21.6	21.6
Prop In Lane	1.00		0.02	1.00		0.46	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	271	0	244	171	205	199	329	2970		406	1069	1106
V/C Ratio(X)	0.42	0.00	0.86	0.52	0.36	0.38	0.14	0.34		0.33	0.46	0.46
Avail Cap(c_a), veh/h	448	0	442	181	228	222	384	2970		568	1069	1106
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.99	0.99	0.99	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	0.0	59.3	49.2	56.5	56.6	11.4	14.6	0.0	11.0	15.1	15.1
Incr Delay (d2), s/veh	1.0	0.0	8.7	2.4	1.1	1.2	0.2	0.1	0.0	0.5	1.4	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	7.8	2.8	2.5	2.6	0.6	5.4	0.0	1.6	8.8	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.0	0.0	68.0	51.6	57.6	57.8	11.6	14.7	0.0	11.4	16.5	16.5
LnGrp LOS	D		E	D	E	E	B	B		B	B	B
Approach Vol, veh/h		323			240			1051			1141	
Approach Delay, s/veh		61.7			55.5			14.6			15.9	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	90.9	14.2	24.8	12.3	88.7	15.9	23.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	64.0	9.0	34.0	19.0	54.0	24.0	19.0
Max Q Clear Time (g_c+I1), s	3.5	23.6	8.4	17.8	6.1	16.3	9.8	8.0
Green Ext Time (p_c), s	0.0	7.7	0.0	1.0	0.2	8.4	0.2	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	24.2
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	601	39	14	243	45	11	29	21	172	57	17
Future Volume (vph)	33	601	39	14	243	45	11	29	21	172	57	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00		1.00	
Frt		0.99			0.98			1.00	0.85		0.99	
Flt Protected		1.00			1.00			0.99	1.00		0.97	
Satd. Flow (prot)		3433			3291			1784	1615		1755	
Flt Permitted		0.91			0.91			0.90	1.00		0.76	
Satd. Flow (perm)		3139			2991			1621	1615		1387	
Peak-hour factor, PHF	0.92	0.92	0.92	0.76	0.76	0.76	0.90	0.90	0.90	0.92	0.92	0.92
Adj. Flow (vph)	36	653	42	18	320	59	12	32	23	187	62	18
RTOR Reduction (vph)	0	3	0	0	8	0	0	0	17	0	3	0
Lane Group Flow (vph)	0	728	0	0	389	0	0	44	6	0	264	0
Heavy Vehicles (%)	3%	4%	5%	7%	7%	7%	0%	7%	0%	3%	5%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4		4	8		
Actuated Green, G (s)		75.1			75.1			32.9	32.9		32.9	
Effective Green, g (s)		75.1			75.1			32.9	32.9		32.9	
Actuated g/C Ratio		0.63			0.63			0.27	0.27		0.27	
Clearance Time (s)		6.0			6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1964			1871			444	442		380	
v/s Ratio Prot												
v/s Ratio Perm		c0.23			0.13			0.03	0.00		c0.19	
v/c Ratio		0.37			0.21			0.10	0.01		0.69	
Uniform Delay, d1		10.9			9.7			32.5	31.7		39.1	
Progression Factor		1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.5			0.3			0.1	0.0		5.4	
Delay (s)		11.5			9.9			32.6	31.7		44.5	
Level of Service		B			A			C	C		D	
Approach Delay (s/veh)		11.5			9.9			32.3			44.5	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	4	439	8	5	264
Future Vol, veh/h	5	4	439	8	5	264
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	93	93	91	91
Heavy Vehicles, %	20	25	6	25	20	7
Mvmt Flow	7	5	472	9	5	290

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	777	476	0	0	481	0
Stage 1	476	-	-	-	-	-
Stage 2	301	-	-	-	-	-
Critical Hdwy	6.6	6.45	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.525	-	-	2.38	-
Pot Cap-1 Maneuver	341	544	-	-	994	-
Stage 1	589	-	-	-	-	-
Stage 2	711	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	339	544	-	-	994	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	589	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.62	0	0.16
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	485	994	-
HCM Lane V/C Ratio	-	-	0.025	0.006	-
HCM Ctrl Dly (s/v)	-	-	12.6	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	12	7	42	9	2
Future Vol, veh/h	1	12	7	42	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	25	14	7	22	0
Mvmt Flow	1	13	8	46	10	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	53	0	-	0	46	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	15	-
Critical Hdwy	4.1	-	-	-	6.62	6.2
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	2.2	-	-	-	3.698	3.3
Pot Cap-1 Maneuver	1565	-	-	-	916	1050
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1565	-	-	-	916	1050
Mov Cap-2 Maneuver	-	-	-	-	916	-
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.56	0	8.89
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	138	-	-	-	937
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Ctrl Dly (s/v)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	5.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	12	3	4	45	4
Future Vol, veh/h	9	12	3	4	45	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	17	0	0	9	0
Mvmt Flow	10	13	3	4	49	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	23	0	27	16
Stage 1	-	-	-	-	16	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.2	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1606	-	970	1069
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1606	-	968	1069
Mov Cap-2 Maneuver	-	-	-	-	968	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.11	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	976	-	-	771	-
HCM Lane V/C Ratio	0.055	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	19	383	94	38	256
Future Vol, veh/h	18	19	383	94	38	256
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	95	95	88	88
Heavy Vehicles, %	6	11	8	2	0	7
Mvmt Flow	23	25	403	99	43	291

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	830	453	0	0	502	0
Stage 1	453	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.46	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	335	589	-	-	1073	-
Stage 1	632	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	321	589	-	-	1073	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	657	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.86	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	506	1073	-
HCM Lane V/C Ratio	-	-	0.095	0.04	-
HCM Ctrl Dly (s/v)	-	-	12.9	8.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	120	4	7	25	8	36
Future Vol, veh/h	120	4	7	25	8	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	55	55	69	69
Heavy Vehicles, %	1	0	29	8	0	11
Mvmt Flow	150	5	13	45	12	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	155	0	223	153
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	71	-
Critical Hdwy	-	-	4.39	-	6.4	6.31
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.461	-	3.5	3.399
Pot Cap-1 Maneuver	-	-	1276	-	769	870
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1276	-	761	870
Mov Cap-2 Maneuver	-	-	-	-	761	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	947	-

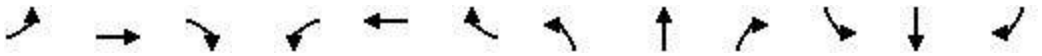
Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.72	9.59
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	848	-	-	394	-
HCM Lane V/C Ratio	0.075	-	-	0.01	-
HCM Ctrl Dly (s/v)	9.6	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	0	50	2	0	7	2	1103	12	25	1037	47
Future Volume (veh/h)	56	0	50	2	0	7	2	1103	12	25	1037	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1811	1900	1900	1900	1900	1900	1841	1900	1900	1856	1767
Adj Flow Rate, veh/h	70	0	62	4	0	12	2	1137	12	28	1165	53
Peak Hour Factor	0.80	0.80	0.80	0.56	0.56	0.56	0.97	0.97	0.97	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	0	0	0	0	0	4	0	0	3	9
Cap, veh/h	89	0	196	41	5	40	26	2498	26	384	2702	123
Arrive On Green	0.05	0.00	0.13	0.03	0.00	0.03	0.72	0.72	0.72	0.05	1.00	1.00
Sat Flow, veh/h	1753	0	1535	252	145	1190	1	3469	37	1810	3434	156
Grp Volume(v), veh/h	70	0	62	16	0	0	603	0	548	28	598	620
Grp Sat Flow(s),veh/h/ln	1753	0	1535	1586	0	0	1838	0	1668	1810	1763	1827
Q Serve(g_s), s	5.5	0.0	5.1	0.0	0.0	0.0	0.0	0.0	19.1	0.6	0.0	0.0
Cycle Q Clear(g_c), s	5.5	0.0	5.1	1.3	0.0	0.0	19.1	0.0	19.1	0.6	0.0	0.0
Prop In Lane	1.00		1.00	0.25		0.75	0.00		0.02	1.00		0.09
Lane Grp Cap(c), veh/h	89	0	196	86	0	0	1350	0	1202	384	1387	1438
V/C Ratio(X)	0.79	0.00	0.32	0.19	0.00	0.00	0.45	0.00	0.46	0.07	0.43	0.43
Avail Cap(c_a), veh/h	175	0	318	133	0	0	1350	0	1202	522	1387	1438
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	65.7	0.0	55.5	66.0	0.0	0.0	8.2	0.0	8.2	5.9	0.0	0.0
Incr Delay (d2), s/veh	14.2	0.0	0.9	1.0	0.0	0.0	1.1	0.0	1.2	0.1	0.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	2.1	0.6	0.0	0.0	7.4	0.0	6.7	0.2	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.9	0.0	56.4	67.0	0.0	0.0	9.2	0.0	9.4	6.0	0.8	0.8
LnGrp LOS	E		E	E			A		A	A	A	A
Approach Vol, veh/h		132			16			1151			1246	
Approach Delay, s/veh		68.9			67.0			9.3			0.9	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		116.1		23.9	9.3	106.8	13.1	10.8				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		99.0		29.0	14.0	79.0	14.0	9.0				
Max Q Clear Time (g_c+I1), s		2.0		7.1	2.6	21.1	7.5	3.3				
Green Ext Time (p_c), s		11.1		0.3	0.0	9.9	0.1	0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			8.7									
HCM 7th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	13	3	106	23	180	12	299	116	204	308	27
Future Volume (veh/h)	12	13	3	106	23	180	12	299	116	204	308	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1411	1856	1841	1796	1411	1796	1767	1811	1811	1841
Adj Flow Rate, veh/h	17	19	4	120	26	205	12	311	121	227	342	30
Peak Hour Factor	0.70	0.70	0.70	0.88	0.88	0.88	0.96	0.96	0.96	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	33	3	4	7	33	7	9	6	6	4
Cap, veh/h	22	25	5	225	49	236	457	668	260	544	987	87
Arrive On Green	0.03	0.03	0.03	0.15	0.15	0.15	0.01	0.54	0.54	0.07	0.60	0.60
Sat Flow, veh/h	729	814	171	1453	315	1522	1344	1231	479	1725	1641	144
Grp Volume(v), veh/h	40	0	0	146	0	205	12	0	432	227	0	372
Grp Sat Flow(s),veh/h/ln	1714	0	0	1768	0	1522	1344	0	1710	1725	0	1785
Q Serve(g_s), s	2.8	0.0	0.0	9.1	0.0	15.8	0.5	0.0	18.6	6.7	0.0	12.6
Cycle Q Clear(g_c), s	2.8	0.0	0.0	9.1	0.0	15.8	0.5	0.0	18.6	6.7	0.0	12.6
Prop In Lane	0.42		0.10	0.82		1.00	1.00		0.28	1.00		0.08
Lane Grp Cap(c), veh/h	52	0	0	274	0	236	457	0	928	544	0	1074
V/C Ratio(X)	0.78	0.00	0.00	0.53	0.00	0.87	0.03	0.00	0.47	0.42	0.00	0.35
Avail Cap(c_a), veh/h	343	0	0	354	0	304	539	0	928	548	0	1074
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.61	0.00	0.61	1.00	0.00	1.00	0.89	0.00	0.89
Uniform Delay (d), s/veh	57.8	0.0	0.0	46.7	0.0	49.5	12.1	0.0	16.8	11.7	0.0	12.0
Incr Delay (d2), s/veh	21.4	0.0	0.0	1.0	0.0	12.5	0.0	0.0	0.4	0.5	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	4.1	0.0	6.8	0.1	0.0	7.1	2.4	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.2	0.0	0.0	47.7	0.0	62.1	12.1	0.0	17.2	12.2	0.0	12.8
LnGrp LOS	E			D		E	B		B	B		B
Approach Vol, veh/h		40			351			444			599	
Approach Delay, s/veh		79.2			56.1			17.0			12.6	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.6	78.2		9.6	14.7	71.1		24.6				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	39.0		24.0	9.0	39.0		24.0				
Max Q Clear Time (g_c+I1), s	2.5	14.6		4.8	8.7	20.6		17.8				
Green Ext Time (p_c), s	0.0	2.2		0.1	0.0	2.5		0.8				

Intersection Summary	
HCM 7th Control Delay, s/veh	26.5
HCM 7th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	297	50	149	288	5	54	921	65	4	827	50
Future Volume (vph)	67	297	50	149	288	5	54	921	65	4	827	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.98			1.00		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3407			3398		1703	3415		1805	3477	
Flt Permitted		0.67			0.61		0.25	1.00		0.15	1.00	
Satd. Flow (perm)		2309			2095		440	3415		276	3477	
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.90	0.90	0.90	0.93	0.93	0.93
Adj. Flow (vph)	78	345	58	164	316	5	60	1023	72	4	889	54
RTOR Reduction (vph)	0	6	0	0	1	0	0	4	0	0	3	0
Lane Group Flow (vph)	0	475	0	0	484	0	60	1091	0	4	940	0
Heavy Vehicles (%)	8%	2%	4%	5%	4%	0%	6%	4%	14%	0%	3%	2%
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		8		7	4		1	6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		41.0			41.0		75.3	69.0		74.7	74.7	
Effective Green, g (s)		41.0			41.0		75.3	69.0		74.7	74.7	
Actuated g/C Ratio		0.29			0.29		0.54	0.49		0.53	0.53	
Clearance Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		676			613		293	1683		147	1855	
v/s Ratio Prot							c0.01	c0.32			c0.27	
v/s Ratio Perm		0.21			c0.23		0.10			0.01		
v/c Ratio		0.70			0.86dl		0.20	0.65		0.03	0.51	
Uniform Delay, d1		44.1			45.5		16.2	26.5		15.5	20.9	
Progression Factor		1.00			0.19		0.76	0.56		0.34	0.32	
Incremental Delay, d2		3.3			6.1		0.3	1.8		0.0	0.1	
Delay (s)		47.4			15.0		12.6	16.7		5.3	6.8	
Level of Service		D			B		B	B		A	A	
Approach Delay (s/veh)		47.4			15.0			16.5			6.8	
Approach LOS		D			B			B			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

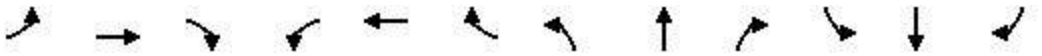
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	292	71	11	412	31	29	40	21	82	136	0
Future Volume (vph)	5	292	71	11	412	31	29	40	21	82	136	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frt		0.97			0.99			1.00	0.85	1.00	1.00	
Flt Protected		1.00			1.00			0.98	1.00	0.95	1.00	
Satd. Flow (prot)		3370			3391			1861	1468	1770	1845	
Flt Permitted		0.95			0.94			0.85	1.00	0.65	1.00	
Satd. Flow (perm)		3196			3186			1615	1468	1217	1845	
Peak-hour factor, PHF	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90	0.84	0.84	0.84
Adj. Flow (vph)	5	314	76	13	474	36	32	44	23	98	162	0
RTOR Reduction (vph)	0	13	0	0	4	0	0	0	12	0	0	0
Lane Group Flow (vph)	0	382	0	0	519	0	0	76	11	98	162	0
Heavy Vehicles (%)	0%	5%	0%	9%	5%	7%	0%	0%	10%	2%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	2		
Actuated Green, G (s)		41.0			41.0			69.0	69.0	86.7	74.7	
Effective Green, g (s)		41.0			41.0			69.0	69.0	86.7	74.7	
Actuated g/C Ratio		0.29			0.29			0.49	0.49	0.62	0.53	
Clearance Time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		935			933			795	723	801	984	
v/s Ratio Prot										c0.01	c0.09	
v/s Ratio Perm		0.12			c0.16			0.05	0.01	0.07		
v/c Ratio		0.41			0.56			0.10	0.02	0.12	0.16	
Uniform Delay, d1		39.8			41.8			18.9	18.1	10.9	16.7	
Progression Factor		0.23			1.00			1.00	1.00	0.46	0.49	
Incremental Delay, d2		0.2			0.7			0.2	0.0	0.0	0.0	
Delay (s)		9.3			42.5			19.1	18.2	5.1	8.2	
Level of Service		A			D			B	B	A	A	
Approach Delay (s/veh)		9.3			42.5			18.9			7.0	
Approach LOS		A			D			B			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	74	992	0	218	882
Future Volume (vph)	0	74	992	0	218	882
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.95		*1.00	0.91
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2760	3471		1752	3353
Flt Permitted		1.00	1.00		0.95	0.91
Satd. Flow (perm)		2760	3471		1752	3047
Peak-hour factor, PHF	0.69	0.69	0.92	0.92	0.94	0.94
Adj. Flow (vph)	0	107	1078	0	232	938
RTOR Reduction (vph)	0	98	0	0	0	0
Lane Group Flow (vph)	0	9	1078	0	209	961
Heavy Vehicles (%)	0%	3%	4%	0%	3%	3%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		12.0	69.0		12.0	86.7
Effective Green, g (s)		12.0	69.0		12.0	86.7
Actuated g/C Ratio		0.09	0.49		0.09	0.62
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		236	1710		150	1913
v/s Ratio Prot		0.00	c0.31		c0.12	c0.04
v/s Ratio Perm						0.27
v/c Ratio		0.04	0.63		1.39	0.50
Uniform Delay, d1		58.7	26.1		64.0	14.7
Progression Factor		1.00	0.27		1.00	1.00
Incremental Delay, d2		0.1	1.3		212.4	0.2
Delay (s)		58.8	8.4		276.4	14.9
Level of Service		E	A		F	B
Approach Delay (s/veh)	58.8		8.4			61.6
Approach LOS	E		A			E

Intersection Summary			
HCM 2000 Control Delay (s/veh)	37.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	317	1	285	2	1	3	190	232	2	0	244	214
Future Volume (veh/h)	317	1	285	2	1	3	190	232	2	0	244	214
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1900	1870	1159	1900	1900	1811	1841	1900	1900	1811	1826
Adj Flow Rate, veh/h	323	1	291	3	1	4	229	280	2	0	271	238
Peak Hour Factor	0.98	0.98	0.98	0.75	0.75	0.75	0.83	0.83	0.83	0.90	0.90	0.90
Percent Heavy Veh, %	4	0	2	50	0	0	6	4	0	0	6	5
Cap, veh/h	307	1	276	6	2	8	461	910	7	0	659	560
Arrive On Green	0.34	0.34	0.34	0.01	0.01	0.01	0.08	0.50	0.50	0.00	0.75	0.75
Sat Flow, veh/h	898	3	809	643	214	857	1725	1825	13	0	1855	1498
Grp Volume(v), veh/h	615	0	0	8	0	0	229	0	282	0	264	245
Grp Sat Flow(s),veh/h/ln	1710	0	0	1714	0	0	1725	0	1838	0	1721	1541
Q Serve(g_s), s	41.0	0.0	0.0	0.6	0.0	0.0	9.0	0.0	10.9	0.0	6.7	7.1
Cycle Q Clear(g_c), s	41.0	0.0	0.0	0.6	0.0	0.0	9.0	0.0	10.9	0.0	6.7	7.1
Prop In Lane	0.53		0.47	0.37		0.50	1.00		0.01	0.00		0.97
Lane Grp Cap(c), veh/h	584	0	0	17	0	0	461	0	917	0	643	576
V/C Ratio(X)	1.05	0.00	0.00	0.48	0.00	0.00	0.50	0.00	0.31	0.00	0.41	0.43
Avail Cap(c_a), veh/h	584	0	0	143	0	0	461	0	917	0	643	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.85	0.00	0.85	0.00	0.84	0.84
Uniform Delay (d), s/veh	39.5	0.0	0.0	59.1	0.0	0.0	20.8	0.0	17.8	0.0	10.4	10.4
Incr Delay (d2), s/veh	51.9	0.0	0.0	19.7	0.0	0.0	0.7	0.0	0.7	0.0	1.6	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.1	0.0	0.0	0.3	0.0	0.0	4.0	0.0	4.7	0.0	2.3	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	91.4	0.0	0.0	78.8	0.0	0.0	21.5	0.0	18.6	0.0	12.0	12.3
LnGrp LOS	F			E			C		B		B	B
Approach Vol, veh/h		615			8			511			509	
Approach Delay, s/veh		91.4			78.8			19.9			12.1	
Approach LOS		F			E			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.0	50.8		7.2		65.8		47.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	9.0	36.0		10.0		51.0		41.0				
Max Q Clear Time (g_c+I1), s	11.0	9.1		2.6		12.9		43.0				
Green Ext Time (p_c), s	0.0	3.3		0.0		1.7		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			44.6									
HCM 7th LOS			D									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	155	75	287	271	227	296
Future Volume (vph)	155	75	287	271	227	296
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			0.95
Frt	0.96		0.93			1.00
Flt Protected	0.97		1.00			0.98
Satd. Flow (prot)	1653		1707			3383
Flt Permitted	0.97		1.00			0.58
Satd. Flow (perm)	1653		1707			2021
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.87	0.87
Adj. Flow (vph)	167	81	309	291	261	340
RTOR Reduction (vph)	16	0	16	0	0	0
Lane Group Flow (vph)	232	0	584	0	0	601
Heavy Vehicles (%)	6%	7%	5%	3%	5%	4%
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases					2	
Actuated Green, G (s)	22.0		86.0			86.0
Effective Green, g (s)	22.0		86.0			86.0
Actuated g/C Ratio	0.18		0.72			0.72
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	303		1223			1448
v/s Ratio Prot	c0.14		c0.34			
v/s Ratio Perm						0.30
v/c Ratio	0.76		0.48			0.42
Uniform Delay, d1	46.5		7.3			6.9
Progression Factor	1.00		1.41			1.00
Incremental Delay, d2	10.9		1.1			0.2
Delay (s)	57.5		11.4			7.0
Level of Service	E		B			A
Approach Delay (s/veh)	57.5		11.4			7.0
Approach LOS	E		B			A

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	58	7	14	60	23	3	263	12	24	593	49
Future Volume (veh/h)	94	58	7	14	60	23	3	263	12	24	593	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1900	1796	1900	1900	1900	1885	1900	1900	1885	1870
Adj Flow Rate, veh/h	107	66	8	16	69	26	3	302	14	25	611	51
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.87	0.87	0.87	0.97	0.97	0.97
Percent Heavy Veh, %	1	0	0	7	0	0	0	1	0	0	1	2
Cap, veh/h	160	80	9	51	180	61	29	1366	63	100	2401	199
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.77	0.77	0.77	1.00	1.00	1.00
Sat Flow, veh/h	815	546	63	144	1224	419	4	1779	82	95	3129	259
Grp Volume(v), veh/h	181	0	0	111	0	0	319	0	0	358	0	329
Grp Sat Flow(s),veh/h/ln	1423	0	0	1788	0	0	1865	0	0	1813	0	1669
Q Serve(g_s), s	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	17.6	0.0	0.0	7.7	0.0	0.0	6.7	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.59		0.04	0.14		0.23	0.01		0.04	0.07		0.16
Lane Grp Cap(c), veh/h	250	0	0	292	0	0	1457	0	0	1419	0	1281
V/C Ratio(X)	0.72	0.00	0.00	0.38	0.00	0.00	0.22	0.00	0.00	0.25	0.00	0.26
Avail Cap(c_a), veh/h	458	0	0	531	0	0	1457	0	0	1419	0	1281
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.88	0.00	0.88
Uniform Delay (d), s/veh	58.7	0.0	0.0	54.3	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.0	0.4	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	0.0	3.6	0.0	0.0	2.4	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.7	0.0	0.0	55.1	0.0	0.0	4.9	0.0	0.0	0.4	0.0	0.4
LnGrp LOS	E			E			A			A		A
Approach Vol, veh/h		181			111			319			687	
Approach Delay, s/veh		62.7			55.1			4.9			0.4	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		113.5		26.5		113.5		26.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		88.0		40.0		88.0		40.0				
Max Q Clear Time (g_c+I1), s		2.0		9.7		8.7		19.6				
Green Ext Time (p_c), s		4.8		0.6		2.1		1.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	14.9
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	62	23	67	128	120	15	315	40	51	553	38
Future Volume (veh/h)	45	62	23	67	128	120	15	315	40	51	553	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1900	1856	1856	1856	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	58	81	30	71	135	126	16	346	44	56	608	42
Peak Hour Factor	0.77	0.77	0.77	0.95	0.95	0.95	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	3	0	3	3	3	0	2	0	0	1	0
Cap, veh/h	85	111	35	125	219	388	582	1086	138	726	1164	80
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	205	451	142	367	890	1572	794	1626	207	1010	1743	120
Grp Volume(v), veh/h	169	0	0	206	0	126	16	0	390	56	0	650
Grp Sat Flow(s),veh/h/ln	797	0	0	1257	0	1572	794	0	1833	1010	0	1864
Q Serve(g_s), s	11.1	0.0	0.0	0.0	0.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	31.5	0.0	0.0	20.5	0.0	9.2	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.34		0.18	0.34		1.00	1.00		0.11	1.00		0.06
Lane Grp Cap(c), veh/h	231	0	0	345	0	388	582	0	1224	726	0	1244
V/C Ratio(X)	0.73	0.00	0.00	0.60	0.00	0.32	0.03	0.00	0.32	0.08	0.00	0.52
Avail Cap(c_a), veh/h	488	0	0	625	0	663	582	0	1224	726	0	1244
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.6	0.0	0.0	46.7	0.0	43.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.4	0.0	0.0	1.7	0.0	0.5	0.0	0.0	0.1	0.2	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.0	6.6	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.0	0.0	0.0	48.4	0.0	43.7	0.0	0.0	0.1	0.2	0.0	1.6
LnGrp LOS	E			D		D	A		A	A		A
Approach Vol, veh/h		169			332			406			706	
Approach Delay, s/veh		59.0			46.6			0.1			1.5	
Approach LOS		E			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		99.5		40.5		99.5		40.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		69.0		59.0		69.0		59.0				
Max Q Clear Time (g_c+I1), s		2.0		33.5		2.0		22.5				
Green Ext Time (p_c), s		5.4		1.0		2.7		1.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	16.5
HCM 7th LOS	B

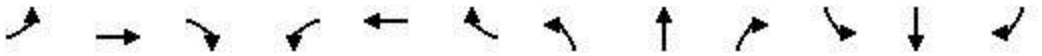
Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	127	6	28	321	25	7	4	43	6	7	8
Future Vol, veh/h	16	127	6	28	321	25	7	4	43	6	7	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	90	90	90	71	71	71	66	66	66
Heavy Vehicles, %	0	2	0	0	2	8	0	0	0	17	0	13
Mvmt Flow	19	153	7	31	357	28	10	6	61	9	11	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	384	0	0	160	0	0	441	642	80	551	632	192
Stage 1	-	-	-	-	-	-	195	195	-	433	433	-
Stage 2	-	-	-	-	-	-	246	447	-	118	199	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.84	6.5	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.84	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.84	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.67	4	3.43
Pot Cap-1 Maneuver	1185	-	-	1431	-	-	505	395	970	386	400	784
Stage 1	-	-	-	-	-	-	794	743	-	533	585	-
Stage 2	-	-	-	-	-	-	742	577	-	832	740	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1185	-	-	1431	-	-	464	379	970	342	384	784
Mov Cap-2 Maneuver	-	-	-	-	-	-	464	379	-	342	384	-
Stage 1	-	-	-	-	-	-	780	730	-	520	571	-
Stage 2	-	-	-	-	-	-	699	563	-	761	728	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.96	0.7	10.17	13.47
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	772	364	-	-	245	-	-	457
HCM Lane V/C Ratio	0.099	0.016	-	-	0.022	-	-	0.07
HCM Ctrl Dly (s/v)	10.2	8.1	0.1	-	7.6	0.2	-	13.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	96	11	200	178	22	141	1298	262	77	1234	68
Future Volume (veh/h)	83	96	11	200	178	22	141	1298	262	77	1234	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1900	1870	1856	1900	1900	1885	1885	1870	1870	1900
Adj Flow Rate, veh/h	104	120	14	233	207	26	144	1324	0	83	1327	73
Peak Hour Factor	0.80	0.80	0.80	0.86	0.86	0.86	0.98	0.98	0.98	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	0	2	3	0	0	1	1	2	2	0
Cap, veh/h	224	144	17	232	377	47	273	3282		311	2146	118
Arrive On Green	0.06	0.09	0.09	0.09	0.12	0.12	0.04	0.64	0.00	0.03	0.63	0.63
Sat Flow, veh/h	1810	1631	190	1781	3156	392	1810	5147	1598	1781	3425	188
Grp Volume(v), veh/h	104	0	134	233	114	119	144	1324	0	83	687	713
Grp Sat Flow(s),veh/h/ln	1810	0	1821	1781	1763	1785	1810	1716	1598	1781	1777	1837
Q Serve(g_s), s	8.0	0.0	11.6	15.0	9.8	10.0	4.6	20.1	0.0	2.6	37.7	37.9
Cycle Q Clear(g_c), s	8.0	0.0	11.6	15.0	9.8	10.0	4.6	20.1	0.0	2.6	37.7	37.9
Prop In Lane	1.00		0.10	1.00		0.22	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	224	0	160	232	211	213	273	3282		311	1113	1151
V/C Ratio(X)	0.46	0.00	0.84	1.01	0.54	0.56	0.53	0.40		0.27	0.62	0.62
Avail Cap(c_a), veh/h	270	0	319	232	320	324	299	3282		357	1113	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.94	0.94	0.94	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	0.0	71.8	64.3	66.3	66.4	16.7	14.1	0.0	10.8	18.2	18.2
Incr Delay (d2), s/veh	1.5	0.0	10.7	58.8	2.0	2.1	1.6	0.1	0.0	0.5	2.6	2.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	5.9	5.9	4.5	4.7	1.9	7.7	0.0	1.0	15.9	16.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.7	0.0	82.6	123.1	68.4	68.5	18.3	14.2	0.0	11.3	20.8	20.7
LnGrp LOS	E		F	F	E	E	B	B		B	C	C
Approach Vol, veh/h		238			466			1468			1483	
Approach Delay, s/veh		72.1			95.8			14.6			20.2	
Approach LOS		E			F			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	106.3	21.0	20.1	10.9	108.0	16.0	25.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	84.0	15.0	28.0	9.0	84.0	14.0	29.0
Max Q Clear Time (g_c+I1), s	6.6	39.9	17.0	13.6	4.6	22.1	10.0	12.0
Green Ext Time (p_c), s	0.1	13.4	0.0	0.5	0.1	13.5	0.1	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	31.0
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	307	54	54	296	137	22	167	49	88	176	29
Future Volume (vph)	53	307	54	54	296	137	22	167	49	88	176	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00		1.00	
Frt		0.98			0.96			1.00	0.85		0.99	
Flt Protected		0.99			0.99			0.99	1.00		0.99	
Satd. Flow (prot)		3456			3359			1889	1583		1847	
Flt Permitted		0.80			0.83			0.93	1.00		0.72	
Satd. Flow (perm)		2786			2813			1772	1583		1356	
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.81	0.81	0.81
Adj. Flow (vph)	60	345	61	64	348	161	25	188	55	109	217	36
RTOR Reduction (vph)	0	7	0	0	25	0	0	0	37	0	5	0
Lane Group Flow (vph)	0	459	0	0	548	0	0	213	18	0	357	0
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%	0%	0%	2%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4		4	8		
Actuated Green, G (s)		68.2			68.2			39.8	39.8		39.8	
Effective Green, g (s)		68.2			68.2			39.8	39.8		39.8	
Actuated g/C Ratio		0.57			0.57			0.33	0.33		0.33	
Clearance Time (s)		6.0			6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1583			1598			587	525		449	
v/s Ratio Prot												
v/s Ratio Perm		0.16			c0.19			0.12	0.01		c0.26	
v/c Ratio		0.29			0.34			0.36	0.03		0.80	
Uniform Delay, d1		13.4			13.9			30.5	27.1		36.4	
Progression Factor		1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.5			0.6			0.4	0.0		9.4	
Delay (s)		13.8			14.5			30.9	27.1		45.8	
Level of Service		B			B			C	C		D	
Approach Delay (s/veh)		13.8			14.5			30.1			45.8	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	473	8	4	629
Future Vol, veh/h	7	7	473	8	4	629
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	89	89	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	12	12	531	9	4	691

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1236	536	0	0	540	0
Stage 1	536	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	196	549	-	-	1038	-
Stage 1	591	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	196	549	-	-	1038	-
Mov Cap-2 Maneuver	334	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	494	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.21	0	0.05
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	415	1038	-
HCM Lane V/C Ratio	-	-	0.058	0.004	-
HCM Ctrl Dly (s/v)	-	-	14.2	8.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	2	8	48	11	6
Future Vol, veh/h	10	2	8	48	11	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	20	0	0	4	9	0
Mvmt Flow	11	2	9	52	12	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	61	0	-	0	59	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	24	-
Critical Hdwy	4.3	-	-	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.38	-	-	-	3.581	3.3
Pot Cap-1 Maneuver	1435	-	-	-	931	1044
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1435	-	-	-	924	1044
Mov Cap-2 Maneuver	-	-	-	-	924	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	981	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	6.27	0	8.81
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1433	-	-	-	963
HCM Lane V/C Ratio	0.008	-	-	-	0.019
HCM Ctrl Dly (s/v)	7.5	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	5.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	11	2	10	37	1
Future Vol, veh/h	2	11	2	10	37	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	9	0	0	5	0
Mvmt Flow	2	12	2	11	40	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	14	0	23	8
Stage 1	-	-	-	-	8	-
Stage 2	-	-	-	-	15	-
Critical Hdwy	-	-	4.1	-	6.45	6.2
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.3
Pot Cap-1 Maneuver	-	-	1617	-	985	1080
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	1000	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1617	-	984	1080
Mov Cap-2 Maneuver	-	-	-	-	984	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	998	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.2	8.81
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	986	-	-	300	-
HCM Lane V/C Ratio	0.042	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.8	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	49	35	437	80	57	591
Future Vol, veh/h	49	35	437	80	57	591
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	94	94	96	96
Heavy Vehicles, %	0	0	2	0	2	1
Mvmt Flow	54	38	465	85	59	616

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1242	507	0	0	550	0
Stage 1	507	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	195	569	-	-	1020	-
Stage 1	609	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	183	569	-	-	1020	-
Mov Cap-2 Maneuver	317	-	-	-	-	-
Stage 1	609	-	-	-	-	-
Stage 2	450	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	17.11	0	0.77
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	389	1020	-
HCM Lane V/C Ratio	-	-	0.237	0.058	-
HCM Ctrl Dly (s/v)	-	-	17.1	8.7	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.2	-

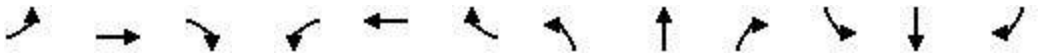
Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	140	8	9	43	9	49
Future Vol, veh/h	140	8	9	43	9	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	81	81	76	76
Heavy Vehicles, %	1	0	11	0	0	2
Mvmt Flow	167	10	11	53	12	64

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	176	0	247	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	75	-
Critical Hdwy	-	-	4.21	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.299	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1347	-	746	872
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	953	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1347	-	740	872
Mov Cap-2 Maneuver	-	-	-	-	740	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	945	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.33	9.66
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	849	-	-	312	-
HCM Lane V/C Ratio	0.09	-	-	0.008	-
HCM Ctrl Dly (s/v)	9.7	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	5	72	4	1	32	4	1414	24	27	1330	58
Future Volume (veh/h)	92	5	72	4	1	32	4	1414	24	27	1330	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1856	1900	1900	1900	1530	1885	1900	1900	1870	1870
Adj Flow Rate, veh/h	118	6	92	6	2	52	5	1607	27	31	1529	67
Peak Hour Factor	0.78	0.78	0.78	0.62	0.62	0.62	0.88	0.88	0.88	0.87	0.87	0.87
Percent Heavy Veh, %	2	0	3	0	0	0	25	1	0	0	2	2
Cap, veh/h	139	16	251	29	6	69	25	2459	41	227	2638	115
Arrive On Green	0.08	0.16	0.16	0.05	0.05	0.05	0.70	0.70	0.70	0.05	1.00	1.00
Sat Flow, veh/h	1781	100	1526	90	125	1395	3	3514	59	1810	3468	152
Grp Volume(v), veh/h	118	0	98	60	0	0	858	0	781	31	781	815
Grp Sat Flow(s),veh/h/ln	1781	0	1625	1609	0	0	1871	0	1705	1810	1777	1843
Q Serve(g_s), s	10.5	0.0	8.6	2.4	0.0	0.0	0.0	0.0	40.6	0.8	0.0	0.0
Cycle Q Clear(g_c), s	10.5	0.0	8.6	5.9	0.0	0.0	40.1	0.0	40.6	0.8	0.0	0.0
Prop In Lane	1.00		0.94	0.10		0.87	0.01		0.03	1.00		0.08
Lane Grp Cap(c), veh/h	139	0	267	104	0	0	1332	0	1193	227	1351	1402
V/C Ratio(X)	0.85	0.00	0.37	0.58	0.00	0.00	0.64	0.00	0.65	0.14	0.58	0.58
Avail Cap(c_a), veh/h	156	0	295	115	0	0	1332	0	1193	365	1351	1402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	72.9	0.0	59.4	75.1	0.0	0.0	13.2	0.0	13.3	11.7	0.0	0.0
Incr Delay (d2), s/veh	31.5	0.0	0.8	5.7	0.0	0.0	2.4	0.0	2.8	0.2	1.2	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	3.7	2.6	0.0	0.0	17.0	0.0	15.7	0.3	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	104.3	0.0	60.3	80.8	0.0	0.0	15.7	0.0	16.1	11.8	1.2	1.1
LnGrp LOS	F		E	F			B		B	B	A	A
Approach Vol, veh/h		216			60			1639			1627	
Approach Delay, s/veh		84.3			80.8			15.9			1.4	
Approach LOS		F			F			B			A	

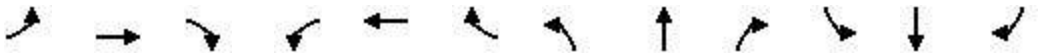
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		127.7		32.3	9.7	117.9	18.4	13.9				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		119.0		29.0	16.0	97.0	14.0	9.0				
Max Q Clear Time (g_c+I1), s		2.0		10.6	2.8	42.6	12.5	7.9				
Green Ext Time (p_c), s		19.8		0.5	0.0	19.2	0.0	0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			14.5									
HCM 7th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	16	8	222	24	248	35	403	99	196	568	37
Future Volume (veh/h)	31	16	8	222	24	248	35	403	99	196	568	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1900	1885	1841	1885	1900	1870	1900	1870	1885	1781
Adj Flow Rate, veh/h	36	19	9	244	26	273	37	424	104	200	580	38
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.95	0.95	0.95	0.98	0.98	0.98
Percent Heavy Veh, %	3	0	0	1	4	1	0	2	0	2	1	8
Cap, veh/h	47	25	12	284	30	285	458	781	192	471	1008	66
Arrive On Green	0.05	0.05	0.05	0.18	0.18	0.18	0.03	0.54	0.54	0.09	0.77	0.77
Sat Flow, veh/h	1015	535	254	1592	170	1598	1810	1451	356	1781	1750	115
Grp Volume(v), veh/h	64	0	0	270	0	273	37	0	528	200	0	618
Grp Sat Flow(s),veh/h/ln	1804	0	0	1761	0	1598	1810	0	1806	1781	0	1865
Q Serve(g_s), s	4.9	0.0	0.0	20.8	0.0	23.7	1.3	0.0	26.7	7.0	0.0	19.4
Cycle Q Clear(g_c), s	4.9	0.0	0.0	20.8	0.0	23.7	1.3	0.0	26.7	7.0	0.0	19.4
Prop In Lane	0.56		0.14	0.90		1.00	1.00		0.20	1.00		0.06
Lane Grp Cap(c), veh/h	84	0	0	314	0	285	458	0	973	471	0	1074
V/C Ratio(X)	0.76	0.00	0.00	0.86	0.00	0.96	0.08	0.00	0.54	0.42	0.00	0.58
Avail Cap(c_a), veh/h	309	0	0	314	0	285	513	0	973	483	0	1074
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	0.54	0.00	0.54	1.00	0.00	1.00	0.74	0.00	0.74
Uniform Delay (d), s/veh	65.9	0.0	0.0	55.8	0.0	57.0	14.2	0.0	21.1	15.1	0.0	9.2
Incr Delay (d2), s/veh	13.0	0.0	0.0	12.2	0.0	28.5	0.1	0.0	0.6	0.4	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	10.3	0.0	11.7	0.5	0.0	11.2	2.7	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.9	0.0	0.0	68.0	0.0	85.5	14.3	0.0	21.7	15.6	0.0	10.9
LnGrp LOS	E			E		F	B		C	B		B
Approach Vol, veh/h		64			543			565			818	
Approach Delay, s/veh		78.9			76.8			21.2			12.0	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	86.6		12.5	15.1	81.4		31.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	8.0	59.0		24.0	10.0	57.0		25.0				
Max Q Clear Time (g_c+I1), s	3.3	21.4		6.9	9.0	28.7		25.7				
Green Ext Time (p_c), s	0.0	4.6		0.2	0.1	3.6		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	34.5	
HCM 7th LOS	C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	206	54	206	375	25	74	1164	87	9	904	97
Future Volume (vph)	66	206	54	206	375	25	74	1164	87	9	904	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.98			0.99		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3398			3462		1787	3505		1805	3485	
Flt Permitted		0.59			0.65		0.12	1.00		0.07	1.00	
Satd. Flow (perm)		2021			2296		232	3505		135	3485	
Peak-hour factor, PHF	0.81	0.81	0.81	0.91	0.91	0.91	0.95	0.95	0.95	0.84	0.84	0.84
Adj. Flow (vph)	81	254	67	226	412	27	78	1225	92	11	1076	115
RTOR Reduction (vph)	0	9	0	0	2	0	0	3	0	0	5	0
Lane Group Flow (vph)	0	393	0	0	663	0	78	1314	0	11	1186	0
Heavy Vehicles (%)	3%	2%	4%	2%	2%	0%	1%	2%	1%	0%	2%	3%
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		Perm	NA	
Protected Phases		8		7	4		1	6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		56.4			56.4		82.7	74.0		76.9	76.9	
Effective Green, g (s)		56.4			56.4		82.7	74.0		76.9	76.9	
Actuated g/C Ratio		0.35			0.35		0.52	0.46		0.48	0.48	
Clearance Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		712			809		204	1621		64	1674	
v/s Ratio Prot							c0.02	c0.37			c0.34	
v/s Ratio Perm		0.19			c0.29		0.18			0.08		
v/c Ratio		0.55			0.82		0.38	0.81		0.17	0.71	
Uniform Delay, d1		41.6			47.2		24.3	37.0		23.5	32.7	
Progression Factor		1.00			0.22		1.00	0.72		0.36	0.38	
Incremental Delay, d2		0.9			5.1		0.9	3.3		0.5	0.2	
Delay (s)		42.6			15.4		25.2	29.8		9.0	12.5	
Level of Service		D			B		C	C		A	B	
Approach Delay (s/veh)		42.6			15.4			29.5			12.5	
Approach LOS		D			B			C			B	

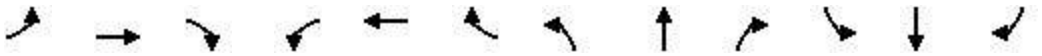
Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	85.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	239	78	28	604	71	50	174	32	25	136	0
Future Volume (vph)	4	239	78	28	604	71	50	174	32	25	136	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frt		0.96			0.98			1.00	0.85	1.00	1.00	
Flt Protected		1.00			1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3368			3459			1863	1524	1805	1881	
Flt Permitted		0.94			0.92			0.89	1.00	0.47	1.00	
Satd. Flow (perm)		3183			3179			1669	1524	885	1881	
Peak-hour factor, PHF	0.85	0.85	0.85	0.91	0.91	0.91	0.73	0.73	0.73	0.79	0.79	0.79
Adj. Flow (vph)	5	281	92	31	664	78	68	238	44	32	172	0
RTOR Reduction (vph)	0	17	0	0	5	0	0	0	24	0	0	0
Lane Group Flow (vph)	0	361	0	0	768	0	0	306	20	32	172	0
Heavy Vehicles (%)	0%	3%	4%	0%	3%	0%	4%	0%	6%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	2		
Actuated Green, G (s)		56.4			56.4			74.0	74.0	88.5	76.9	
Effective Green, g (s)		56.4			56.4			74.0	74.0	88.5	76.9	
Actuated g/C Ratio		0.35			0.35			0.46	0.46	0.55	0.48	
Clearance Time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1122			1120			771	704	556	904	
v/s Ratio Prot										c0.00	c0.09	
v/s Ratio Perm		0.11			c0.24			c0.18	0.01	0.03		
v/c Ratio		0.32			0.69			0.40	0.03	0.06	0.19	
Uniform Delay, d1		37.8			44.2			28.3	23.4	16.9	23.8	
Progression Factor		0.43			1.00			1.00	1.00	0.36	0.46	
Incremental Delay, d2		0.1			1.8			1.5	0.1	0.0	0.0	
Delay (s)		16.3			46.0			29.8	23.5	6.1	10.9	
Level of Service		B			D			C	C	A	B	
Approach Delay (s/veh)		16.3			46.0			29.0			10.1	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	256	1262	0	172	1013
Future Volume (vph)	0	256	1262	0	172	1013
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.95		0.91	0.91
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2814	3539		1626	3388
Flt Permitted		1.00	1.00		0.95	0.82
Satd. Flow (perm)		2814	3539		1626	2770
Peak-hour factor, PHF	0.82	0.82	0.95	0.95	0.89	0.89
Adj. Flow (vph)	0	312	1328	0	193	1138
RTOR Reduction (vph)	0	289	0	0	0	0
Lane Group Flow (vph)	0	23	1328	0	174	1157
Heavy Vehicles (%)	0%	1%	2%	0%	1%	2%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		11.6	74.0		11.6	88.5
Effective Green, g (s)		11.6	74.0		11.6	88.5
Actuated g/C Ratio		0.07	0.46		0.07	0.55
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		204	1636		117	1576
v/s Ratio Prot		0.01	c0.38		c0.11	0.05
v/s Ratio Perm						c0.35
v/c Ratio		0.11	0.81		1.49	0.73
Uniform Delay, d1		69.4	37.0		74.2	26.9
Progression Factor		1.00	0.26		1.00	1.00
Incremental Delay, d2		0.2	2.7		259.0	1.8
Delay (s)		69.6	12.2		333.2	28.7
Level of Service		E	B		F	C
Approach Delay (s/veh)	69.6		12.2			68.5
Approach LOS	E		B			E

Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	246	1	218	3	9	8	222	391	9	2	504	233
Future Volume (veh/h)	246	1	218	3	9	8	222	391	9	2	504	233
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1856	1900	1900	1707	1856	1856	1900	1900	1870	1856
Adj Flow Rate, veh/h	286	1	253	3	10	9	255	449	10	2	560	259
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	1	0	3	0	0	13	3	3	0	0	2	3
Cap, veh/h	285	1	252	5	16	15	415	970	22	26	944	434
Arrive On Green	0.31	0.31	0.31	0.02	0.02	0.02	0.09	0.54	0.54	0.82	0.82	0.82
Sat Flow, veh/h	906	3	801	240	799	719	1767	1808	40	1	2313	1065
Grp Volume(v), veh/h	540	0	0	22	0	0	255	0	459	454	0	367
Grp Sat Flow(s),veh/h/ln	1710	0	0	1759	0	0	1767	0	1848	1869	0	1510
Q Serve(g_s), s	44.0	0.0	0.0	1.7	0.0	0.0	11.6	0.0	21.4	0.0	0.0	12.2
Cycle Q Clear(g_c), s	44.0	0.0	0.0	1.7	0.0	0.0	11.6	0.0	21.4	12.1	0.0	12.2
Prop In Lane	0.53		0.47	0.14		0.41	1.00		0.02	0.00		0.70
Lane Grp Cap(c), veh/h	538	0	0	36	0	0	415	0	992	788	0	616
V/C Ratio(X)	1.00	0.00	0.00	0.61	0.00	0.00	0.61	0.00	0.46	0.58	0.00	0.60
Avail Cap(c_a), veh/h	538	0	0	113	0	0	415	0	992	788	0	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.81	0.00	0.81	0.64	0.00	0.64
Uniform Delay (d), s/veh	48.0	0.0	0.0	68.0	0.0	0.0	21.0	0.0	20.0	8.7	0.0	8.7
Incr Delay (d2), s/veh	39.9	0.0	0.0	15.4	0.0	0.0	2.2	0.0	1.3	2.0	0.0	2.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.4	0.0	0.0	0.9	0.0	0.0	5.0	0.0	9.5	3.5	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	87.9	0.0	0.0	83.4	0.0	0.0	23.1	0.0	21.3	10.7	0.0	11.5
LnGrp LOS	F			F			C		C	B		B
Approach Vol, veh/h		540			22			714			821	
Approach Delay, s/veh		87.9			83.4			21.9			11.0	
Approach LOS		F			F			C			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	18.0	63.1		8.9		81.1		50.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	12.0	51.0		9.0		69.0		44.0				
Max Q Clear Time (g_c+I1), s	13.6	14.2		3.7		23.4		46.0				
Green Ext Time (p_c), s	0.0	6.0		0.0		3.1		0.0				

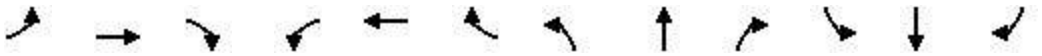
Intersection Summary												
HCM 7th Control Delay, s/veh			35.3									
HCM 7th LOS			D									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	250	177	430	215	154	475
Future Volume (vph)	250	177	430	215	154	475
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			6.0
Lane Util. Factor	1.00		1.00			0.95
Frt	0.94		0.95			1.00
Flt Protected	0.97		1.00			0.99
Satd. Flow (prot)	1709		1779			3496
Flt Permitted	0.97		1.00			0.57
Satd. Flow (perm)	1709		1779			2032
Peak-hour factor, PHF	0.95	0.95	0.92	0.92	0.81	0.81
Adj. Flow (vph)	263	186	467	234	190	586
RTOR Reduction (vph)	19	0	9	0	0	0
Lane Group Flow (vph)	430	0	692	0	0	776
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	4		6		5	2
Permitted Phases					2	
Actuated Green, G (s)	39.5		88.5			88.5
Effective Green, g (s)	39.5		88.5			88.5
Actuated g/C Ratio	0.28		0.63			0.63
Clearance Time (s)	6.0		6.0			6.0
Vehicle Extension (s)	3.0		3.0			3.0
Lane Grp Cap (vph)	482		1124			1284
v/s Ratio Prot	c0.25		c0.39			
v/s Ratio Perm						0.38
v/c Ratio	0.89		0.62			0.60
Uniform Delay, d1	48.2		15.5			15.3
Progression Factor	1.00		0.70			1.00
Incremental Delay, d2	18.4		1.9			0.8
Delay (s)	66.5		12.8			16.1
Level of Service	E		B			B
Approach Delay (s/veh)	66.5		12.8			16.1
Approach LOS	E		B			B

Intersection Summary			
HCM 2000 Control Delay (s/veh)	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

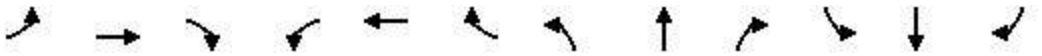
2030 NO-BUILD SYNCHRO REPORTS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	67	5	3	34	5	4	245	13	29	168	13
Future Volume (veh/h)	109	67	5	3	34	5	4	245	13	29	168	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1811	1307	1900	1856	1900	1900	1870	1900	1900	1856	1781
Adj Flow Rate, veh/h	121	74	6	4	48	7	4	253	13	39	227	18
Peak Hour Factor	0.90	0.90	0.90	0.71	0.71	0.71	0.97	0.97	0.97	0.74	0.74	0.74
Percent Heavy Veh, %	9	6	40	0	3	0	0	2	0	0	3	8
Cap, veh/h	187	90	7	38	242	33	919	1314	67	854	1264	100
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.74	0.74	0.74	1.00	1.00	1.00
Sat Flow, veh/h	893	579	45	39	1558	215	1153	1763	91	1131	1697	135
Grp Volume(v), veh/h	201	0	0	59	0	0	4	0	266	39	0	245
Grp Sat Flow(s),veh/h/ln	1518	0	0	1813	0	0	1153	0	1854	1131	0	1831
Q Serve(g_s), s	11.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	5.1	0.2	0.0	0.0
Cycle Q Clear(g_c), s	15.3	0.0	0.0	3.4	0.0	0.0	0.1	0.0	5.1	5.4	0.0	0.0
Prop In Lane	0.60		0.03	0.07		0.12	1.00		0.05	1.00		0.07
Lane Grp Cap(c), veh/h	283	0	0	313	0	0	919	0	1381	854	0	1364
V/C Ratio(X)	0.71	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.19	0.05	0.00	0.18
Avail Cap(c_a), veh/h	715	0	0	834	0	0	919	0	1381	854	0	1364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	49.1	0.0	0.0	44.3	0.0	0.0	3.9	0.0	4.6	0.2	0.0	0.0
Incr Delay (d2), s/veh	3.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.0	1.6	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.3	0.0	0.0	44.6	0.0	0.0	3.9	0.0	4.9	0.3	0.0	0.3
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		201			59			270			284	
Approach Delay, s/veh		52.3			44.6			4.9			0.3	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		95.4		24.6		95.4		24.6				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		54.0		54.0		54.0		54.0				
Max Q Clear Time (g_c+I1), s		7.4		5.4		7.1		17.3				
Green Ext Time (p_c), s		1.7		0.3		1.7		1.3				

Intersection Summary												
HCM 7th Control Delay, s/veh			17.9									
HCM 7th LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	112	24	19	91	101	14	324	88	84	184	13
Future Volume (veh/h)	44	112	24	19	91	101	14	324	88	84	184	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1811	1767	1900	1826	1752	1900	1811	1826	1781	1796	1781
Adj Flow Rate, veh/h	52	133	29	24	114	126	15	352	96	98	214	15
Peak Hour Factor	0.84	0.84	0.84	0.80	0.80	0.80	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	2	6	9	0	5	10	0	6	5	8	7	8
Cap, veh/h	75	175	33	203	183	203	842	916	250	660	1109	78
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	165	757	145	1243	792	876	1170	1370	374	897	1659	116
Grp Volume(v), veh/h	214	0	0	24	0	240	15	0	448	98	0	229
Grp Sat Flow(s),veh/h/ln	1067	0	0	1243	0	1668	1170	0	1744	897	0	1775
Q Serve(g_s), s	9.3	0.0	0.0	0.0	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	24.8	0.0	0.0	4.3	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.24		0.14	1.00		0.52	1.00		0.21	1.00		0.07
Lane Grp Cap(c), veh/h	284	0	0	203	0	386	842	0	1166	660	0	1187
V/C Ratio(X)	0.75	0.00	0.00	0.12	0.00	0.62	0.02	0.00	0.38	0.15	0.00	0.19
Avail Cap(c_a), veh/h	453	0	0	340	0	570	842	0	1166	660	0	1187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.99	0.00	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.3	0.0	0.0	37.1	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.0	0.0	0.3	0.0	1.6	0.0	0.0	0.2	0.5	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	0.0	0.6	0.0	6.5	0.0	0.0	0.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.4	0.0	0.0	37.3	0.0	43.0	0.0	0.0	0.2	0.5	0.0	0.4
LnGrp LOS	D			D		D	A		A	A		A
Approach Vol, veh/h		214			264			463			327	
Approach Delay, s/veh		49.4			42.5			0.2			0.4	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.2		33.8		86.2		33.8				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		67.0		41.0		67.0		41.0				
Max Q Clear Time (g_c+I1), s		2.0		26.8		2.0		17.5				
Green Ext Time (p_c), s		2.0		1.0		3.2		1.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			17.4									
HCM 7th LOS			B									

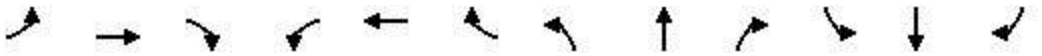
Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	213	11	18	186	25	6	4	69	3	5	3
Future Vol, veh/h	23	213	11	18	186	25	6	4	69	3	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	88	88	88	86	86	86	46	46	46
Heavy Vehicles, %	9	6	0	12	8	8	0	0	2	33	0	0
Mvmt Flow	28	263	14	20	211	28	7	5	80	7	11	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	240	0	0	277	0	0	584	607	138	457	600	226
Stage 1	-	-	-	-	-	-	327	327	-	266	266	-
Stage 2	-	-	-	-	-	-	258	281	-	191	333	-
Critical Hdwy	4.235	-	-	4.28	-	-	7.3	6.5	6.93	7.795	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.595	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.995	5.5	-
Follow-up Hdwy	2.2855	-	-	2.314	-	-	3.5	4	3.319	3.8135	4	3.3
Pot Cap-1 Maneuver	1281	-	-	1222	-	-	412	413	885	443	417	819
Stage 1	-	-	-	-	-	-	666	652	-	665	692	-
Stage 2	-	-	-	-	-	-	751	682	-	720	647	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1281	-	-	1222	-	-	381	396	885	381	400	819
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	396	-	381	400	-
Stage 1	-	-	-	-	-	-	650	636	-	652	679	-
Stage 2	-	-	-	-	-	-	719	669	-	634	632	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.87	0.63	10.38	13.31
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	761	314	-	-	138	-	-	457
HCM Lane V/C Ratio	0.121	0.022	-	-	0.017	-	-	0.052
HCM Ctrl Dly (s/v)	10.4	7.9	0.2	-	8	0	-	13.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	212	4	89	117	36	46	992	377	135	977	50
Future Volume (veh/h)	117	212	4	89	117	36	46	992	377	135	977	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1159	1737	1767	1900	1693	1841	1870	1870	1856	1841
Adj Flow Rate, veh/h	119	216	4	93	122	38	49	1055	0	139	1007	52
Peak Hour Factor	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.97	0.97	0.97
Percent Heavy Veh, %	4	5	50	11	9	0	14	4	2	2	3	4
Cap, veh/h	255	250	5	174	224	204	308	2921		387	2040	105
Arrive On Green	0.07	0.14	0.14	0.06	0.13	0.13	0.03	0.58	0.00	0.05	0.60	0.60
Sat Flow, veh/h	1753	1787	33	1654	1767	1610	1612	5025	1585	1781	3411	176
Grp Volume(v), veh/h	119	0	220	93	122	38	49	1055	0	139	520	539
Grp Sat Flow(s),veh/h/ln	1753	0	1820	1654	1767	1610	1612	1675	1585	1781	1763	1824
Q Serve(g_s), s	8.2	0.0	16.6	6.7	9.1	3.0	1.6	15.6	0.0	4.4	23.6	23.6
Cycle Q Clear(g_c), s	8.2	0.0	16.6	6.7	9.1	3.0	1.6	15.6	0.0	4.4	23.6	23.6
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	255	0	254	174	224	204	308	2921		387	1055	1091
V/C Ratio(X)	0.47	0.00	0.87	0.53	0.55	0.19	0.16	0.36		0.36	0.49	0.49
Avail Cap(c_a), veh/h	426	0	442	181	240	219	362	2921		545	1055	1091
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.4	0.0	58.9	48.5	57.4	54.7	12.2	15.5	0.0	11.6	16.0	16.0
Incr Delay (d2), s/veh	1.3	0.0	8.6	2.7	2.2	0.4	0.2	0.1	0.0	0.6	1.7	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	8.2	2.9	4.2	1.2	0.6	5.9	0.0	1.8	9.7	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.7	0.0	67.6	51.3	59.5	55.1	12.4	15.6	0.0	12.2	17.7	17.6
LnGrp LOS	D		E	D	E	E	B	B		B	B	B
Approach Vol, veh/h		339			253			1104			1198	
Approach Delay, s/veh		61.3			55.8			15.5			17.0	
Approach LOS		E			E			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	89.8	14.4	25.5	12.6	87.4	16.3	23.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	64.0	9.0	34.0	19.0	54.0	24.0	19.0
Max Q Clear Time (g_c+I1), s	3.6	25.6	8.7	18.6	6.4	17.6	10.2	11.1
Green Ext Time (p_c), s	0.0	8.3	0.0	1.0	0.3	8.9	0.2	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	25.0
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	632	41	15	255	47	12	30	22	181	60	18
Future Volume (vph)	35	632	41	15	255	47	12	30	22	181	60	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00		1.00	
Frt		0.99			0.98			1.00	0.85		0.99	
Flt Protected		1.00			1.00			0.99	1.00		0.97	
Satd. Flow (prot)		3432			3291			1784	1615		1754	
Flt Permitted		0.91			0.90			0.89	1.00		0.76	
Satd. Flow (perm)		3127			2964			1609	1615		1385	
Peak-hour factor, PHF	0.92	0.92	0.92	0.76	0.76	0.76	0.90	0.90	0.90	0.92	0.92	0.92
Adj. Flow (vph)	38	687	45	20	336	62	13	33	24	197	65	20
RTOR Reduction (vph)	0	3	0	0	9	0	0	0	17	0	3	0
Lane Group Flow (vph)	0	767	0	0	409	0	0	46	7	0	279	0
Heavy Vehicles (%)	3%	4%	5%	7%	7%	7%	0%	7%	0%	3%	5%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4		4	8		
Actuated Green, G (s)		73.6			73.6			34.4	34.4		34.4	
Effective Green, g (s)		73.6			73.6			34.4	34.4		34.4	
Actuated g/C Ratio		0.61			0.61			0.29	0.29		0.29	
Clearance Time (s)		6.0			6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1917			1817			461	462		397	
v/s Ratio Prot												
v/s Ratio Perm		c0.25			0.14			0.03	0.00		c0.20	
v/c Ratio		0.40			0.23			0.10	0.01		0.70	
Uniform Delay, d1		11.9			10.4			31.4	30.7		38.2	
Progression Factor		1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.6			0.3			0.1	0.0		5.6	
Delay (s)		12.5			10.7			31.5	30.7		43.8	
Level of Service		B			B			C	C		D	
Approach Delay (s/veh)		12.5			10.7			31.2			43.8	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	4	461	8	5	277
Future Vol, veh/h	5	4	461	8	5	277
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	93	93	91	91
Heavy Vehicles, %	20	25	6	25	20	7
Mvmt Flow	7	5	496	9	5	304

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	815	500	0	0	504	0
Stage 1	500	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Critical Hdwy	6.6	6.45	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.525	-	-	2.38	-
Pot Cap-1 Maneuver	323	527	-	-	974	-
Stage 1	574	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	322	527	-	-	974	-
Mov Cap-2 Maneuver	431	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.87	0	0.15
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	469	974	-
HCM Lane V/C Ratio	-	-	0.026	0.006	-
HCM Ctrl Dly (s/v)	-	-	12.9	8.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	13	7	44	9	2
Future Vol, veh/h	1	13	7	44	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	25	14	7	22	0
Mvmt Flow	1	14	8	48	10	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	55	0	-	0	48	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.1	-	-	-	6.62	6.2
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	2.2	-	-	-	3.698	3.3
Pot Cap-1 Maneuver	1562	-	-	-	914	1048
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1562	-	-	-	913	1048
Mov Cap-2 Maneuver	-	-	-	-	913	-
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	957	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.52	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	129	-	-	-	935
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Ctrl Dly (s/v)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	13	3	4	47	4
Future Vol, veh/h	9	13	3	4	47	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	17	0	0	9	0
Mvmt Flow	10	14	3	4	51	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	24	0	28	17
Stage 1	-	-	-	-	17	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.2	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1604	-	970	1068
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1604	-	968	1068
Mov Cap-2 Maneuver	-	-	-	-	968	-
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.11	8.92
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	975	-	-	771	-
HCM Lane V/C Ratio	0.057	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	20	403	99	40	269
Future Vol, veh/h	19	20	403	99	40	269
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	95	95	88	88
Heavy Vehicles, %	6	11	8	2	0	7
Mvmt Flow	25	26	424	104	45	306

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	873	476	0	0	528	0
Stage 1	476	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.46	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	316	571	-	-	1049	-
Stage 1	617	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	302	571	-	-	1049	-
Mov Cap-2 Maneuver	425	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	642	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.21	0	1.11
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	489	1049	-
HCM Lane V/C Ratio	-	-	0.104	0.043	-
HCM Ctrl Dly (s/v)	-	-	13.2	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

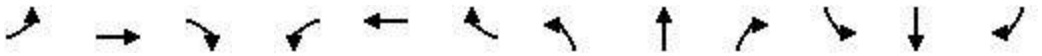
Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	126	4	7	26	8	38
Future Vol, veh/h	126	4	7	26	8	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	55	55	69	69
Heavy Vehicles, %	1	0	29	8	0	11
Mvmt Flow	158	5	13	47	12	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	233	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	73	-
Critical Hdwy	-	-	4.39	-	6.4	6.31
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.461	-	3.5	3.399
Pot Cap-1 Maneuver	-	-	1268	-	760	862
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	955	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1268	-	752	862
Mov Cap-2 Maneuver	-	-	-	-	752	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	945	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.67	9.65
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	841	-	-	382	-
HCM Lane V/C Ratio	0.079	-	-	0.01	-
HCM Ctrl Dly (s/v)	9.7	-	-	7.9	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	0	53	2	0	7	2	1159	13	27	1090	49
Future Volume (veh/h)	59	0	53	2	0	7	2	1159	13	27	1090	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1811	1900	1900	1900	1900	1900	1841	1900	1900	1856	1767
Adj Flow Rate, veh/h	74	0	66	4	0	12	2	1195	13	30	1225	55
Peak Hour Factor	0.80	0.80	0.80	0.56	0.56	0.56	0.97	0.97	0.97	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	0	0	0	0	0	4	0	0	3	9
Cap, veh/h	93	0	200	41	5	41	26	2484	27	362	2694	121
Arrive On Green	0.05	0.00	0.13	0.03	0.00	0.03	0.72	0.72	0.72	0.05	1.00	1.00
Sat Flow, veh/h	1753	0	1535	250	146	1189	1	3468	38	1810	3436	154
Grp Volume(v), veh/h	74	0	66	16	0	0	634	0	576	30	628	652
Grp Sat Flow(s),veh/h/ln	1753	0	1535	1586	0	0	1838	0	1668	1810	1763	1828
Q Serve(g_s), s	5.8	0.0	5.5	0.0	0.0	0.0	0.0	0.0	20.9	0.6	0.0	0.0
Cycle Q Clear(g_c), s	5.8	0.0	5.5	1.3	0.0	0.0	20.9	0.0	20.9	0.6	0.0	0.0
Prop In Lane	1.00		1.00	0.25		0.75	0.00		0.02	1.00		0.08
Lane Grp Cap(c), veh/h	93	0	200	86	0	0	1342	0	1195	362	1382	1433
V/C Ratio(X)	0.79	0.00	0.33	0.19	0.00	0.00	0.47	0.00	0.48	0.08	0.45	0.46
Avail Cap(c_a), veh/h	175	0	318	133	0	0	1342	0	1195	499	1382	1433
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.70	0.70	0.70
Uniform Delay (d), s/veh	65.5	0.0	55.3	65.9	0.0	0.0	8.6	0.0	8.6	6.3	0.0	0.0
Incr Delay (d2), s/veh	13.8	0.0	1.0	1.0	0.0	0.0	1.2	0.0	1.4	0.1	0.8	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	2.2	0.6	0.0	0.0	8.1	0.0	7.4	0.2	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.3	0.0	56.3	66.9	0.0	0.0	9.8	0.0	10.0	6.3	0.8	0.7
LnGrp LOS	E		E	E			A		A	A	A	A
Approach Vol, veh/h		140			16			1210			1310	
Approach Delay, s/veh		68.4			66.9			9.9			0.9	
Approach LOS		E			E			A			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		115.7		24.3	9.4	106.3	13.5	10.8				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		99.0		29.0	14.0	79.0	14.0	9.0				
Max Q Clear Time (g_c+I1), s		2.0		7.5	2.6	22.9	7.8	3.3				
Green Ext Time (p_c), s		12.2		0.3	0.0	10.7	0.1	0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	8.9
HCM 7th LOS	A

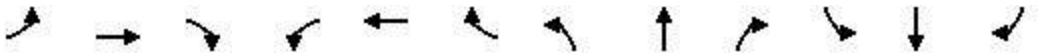
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	14	3	111	24	189	13	314	122	214	324	28
Future Volume (veh/h)	13	14	3	111	24	189	13	314	122	214	324	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1411	1856	1841	1796	1411	1796	1767	1811	1811	1841
Adj Flow Rate, veh/h	19	20	4	126	27	215	14	327	127	238	360	31
Peak Hour Factor	0.70	0.70	0.70	0.88	0.88	0.88	0.96	0.96	0.96	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	33	3	4	7	33	7	9	6	6	4
Cap, veh/h	24	26	5	227	49	237	418	657	255	526	1088	94
Arrive On Green	0.03	0.03	0.03	0.16	0.16	0.16	0.53	0.53	0.53	0.03	0.22	0.22
Sat Flow, veh/h	758	798	160	1456	312	1522	749	1232	478	1725	1644	142
Grp Volume(v), veh/h	43	0	0	153	0	215	14	0	454	238	0	391
Grp Sat Flow(s),veh/h/ln	1715	0	0	1768	0	1522	749	0	1710	1725	0	1786
Q Serve(g_s), s	3.0	0.0	0.0	9.6	0.0	16.7	1.2	0.0	20.2	7.1	0.0	22.1
Cycle Q Clear(g_c), s	3.0	0.0	0.0	9.6	0.0	16.7	7.9	0.0	20.2	7.1	0.0	22.1
Prop In Lane	0.44		0.09	0.82		1.00	1.00		0.28	1.00		0.08
Lane Grp Cap(c), veh/h	55	0	0	276	0	237	418	0	912	526	0	1182
V/C Ratio(X)	0.78	0.00	0.00	0.55	0.00	0.91	0.03	0.00	0.50	0.45	0.00	0.33
Avail Cap(c_a), veh/h	200	0	0	280	0	241	418	0	912	592	0	1182
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	0.00	0.81	0.00	0.81	1.00	0.00	1.00	0.94	0.00	0.94
Uniform Delay (d), s/veh	57.7	0.0	0.0	46.8	0.0	49.8	16.7	0.0	17.8	13.5	0.0	24.5
Incr Delay (d2), s/veh	20.7	0.0	0.0	1.9	0.0	29.0	0.1	0.0	1.9	0.6	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	4.3	0.0	8.2	0.2	0.0	8.2	3.0	0.0	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.4	0.0	0.0	48.7	0.0	78.8	16.8	0.0	19.7	14.1	0.0	25.2
LnGrp LOS	E			D		E	B		B	B		C
Approach Vol, veh/h		43			368			468			629	
Approach Delay, s/veh		78.4			66.3			19.6			21.0	
Approach LOS		E			E			B			C	

Timer - Assigned Phs	2	4	5	6	8
Phs Duration (G+Y+Rc), s	85.4	9.9	15.4	70.0	24.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	69.0	14.0	14.0	49.0	19.0
Max Q Clear Time (g_c+I1), s	24.1	5.0	9.1	22.2	18.7
Green Ext Time (p_c), s	2.6	0.1	0.3	3.1	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	33.3
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	312	53	157	303	5	57	968	68	4	869	53
Future Volume (vph)	70	312	53	157	303	5	57	968	68	4	869	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	1817		1719	1824		1703	3415		1805	3477	
Flt Permitted	0.35	1.00		0.18	1.00		0.16	1.00		0.07	1.00	
Satd. Flow (perm)	611	1817		320	1824		281	3415		129	3477	
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.90	0.90	0.90	0.93	0.93	0.93
Adj. Flow (vph)	81	363	62	173	333	5	63	1076	76	4	934	57
RTOR Reduction (vph)	0	4	0	0	0	0	0	4	0	0	3	0
Lane Group Flow (vph)	81	421	0	173	338	0	63	1148	0	4	988	0
Heavy Vehicles (%)	8%	2%	4%	5%	4%	0%	6%	4%	14%	0%	3%	2%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		Perm	NA	
Protected Phases	3	8		7	4		1	6			2	
Permitted Phases	4			8			2			2		
Actuated Green, G (s)	53.0	38.6		53.0	43.4		63.0	48.0		59.0	59.0	
Effective Green, g (s)	53.0	38.6		53.0	43.4		63.0	48.0		59.0	59.0	
Actuated g/C Ratio	0.38	0.28		0.38	0.31		0.45	0.34		0.42	0.42	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	303	500		265	565		167	1170		54	1465	
v/s Ratio Prot	0.02	c0.23		c0.07	c0.19		c0.01	c0.34			c0.28	
v/s Ratio Perm	0.08			0.18			0.16			0.03		
v/c Ratio	0.27	0.84		0.65	0.60		0.38	0.98		0.07	0.67	
Uniform Delay, d1	29.4	47.8		32.9	40.9		25.0	45.6		24.2	32.7	
Progression Factor	1.00	1.00		1.87	0.21		1.35	0.89		0.21	0.34	
Incremental Delay, d2	0.5	12.1		2.3	0.7		1.3	20.9		0.2	0.2	
Delay (s)	29.9	59.9		63.8	9.2		34.9	61.5		5.4	11.4	
Level of Service	C	E		E	A		C	E		A	B	
Approach Delay (s/veh)		55.1			27.7			60.2			11.3	
Approach LOS		E			C			E			B	

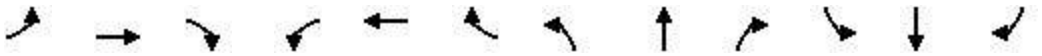
Intersection Summary			
HCM 2000 Control Delay (s/veh)	39.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	307	75	12	433	33	30	42	22	86	143	0
Future Volume (vph)	5	307	75	12	433	33	30	42	22	86	143	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frt		0.97		1.00	0.99			1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00			0.98	1.00	0.95	1.00	
Satd. Flow (prot)		1778		1656	1788			1862	1468	1770	1845	
Flt Permitted		0.80		0.23	1.00			0.84	1.00	0.70	1.00	
Satd. Flow (perm)		1415		406	1788			1596	1468	1313	1845	
Peak-hour factor, PHF	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90	0.84	0.84	0.84
Adj. Flow (vph)	5	330	81	14	498	38	33	47	24	102	170	0
RTOR Reduction (vph)	0	6	0	0	2	0	0	0	16	0	0	0
Lane Group Flow (vph)	0	410	0	14	534	0	0	80	8	102	170	0
Heavy Vehicles (%)	0%	5%	0%	9%	5%	7%	0%	0%	10%	2%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	6		
Actuated Green, G (s)		38.6		43.4	43.4			48.0	48.0	63.0	59.0	
Effective Green, g (s)		38.6		43.4	43.4			48.0	48.0	63.0	59.0	
Actuated g/C Ratio		0.28		0.31	0.31			0.34	0.34	0.45	0.42	
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		390		125	554			547	503	639	777	
v/s Ratio Prot					c0.30					c0.02	c0.09	
v/s Ratio Perm		c0.29		0.03				0.05	0.01	0.05		
v/c Ratio		1.05		0.11	0.96			0.15	0.02	0.16	0.22	
Uniform Delay, d1		50.7		34.5	47.5			31.8	30.4	22.5	25.8	
Progression Factor		0.33		1.00	1.00			1.00	1.00	0.22	0.22	
Incremental Delay, d2		46.2		0.4	29.1			0.6	0.1	0.0	0.1	
Delay (s)		62.8		34.9	76.6			32.4	30.5	5.0	5.8	
Level of Service		E		C	E			C	C	A	A	
Approach Delay (s/veh)		62.8			75.5			31.9			5.5	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	78	1043	0	229	927
Future Volume (vph)	0	78	1043	0	229	927
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.95		0.91	0.91
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2760	3471		1595	3353
Flt Permitted		1.00	1.00		0.95	0.74
Satd. Flow (perm)		2760	3471		1595	2478
Peak-hour factor, PHF	0.69	0.69	0.92	0.92	0.94	0.94
Adj. Flow (vph)	0	113	1134	0	244	986
RTOR Reduction (vph)	0	101	0	0	0	0
Lane Group Flow (vph)	0	12	1134	0	220	1010
Heavy Vehicles (%)	0%	3%	4%	0%	3%	3%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		15.0	48.0		15.0	69.0
Effective Green, g (s)		15.0	48.0		15.0	69.0
Actuated g/C Ratio		0.11	0.34		0.11	0.49
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		295	1190		170	1315
v/s Ratio Prot		0.00	c0.33		c0.14	0.08
v/s Ratio Perm						0.30
v/c Ratio		0.04	0.95		1.29	0.77
Uniform Delay, d1		56.1	44.9		62.5	29.0
Progression Factor		1.00	0.34		1.00	1.00
Incremental Delay, d2		0.1	8.3		168.9	2.8
Delay (s)		56.1	23.4		231.4	31.7
Level of Service		E	C		F	C
Approach Delay (s/veh)	56.1		23.4			67.4
Approach LOS	E		C			E

Intersection Summary			
HCM 2000 Control Delay (s/veh)	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	1	300	2	1	3	200	244	2	0	256	225
Future Volume (veh/h)	333	1	300	2	1	3	200	244	2	0	256	225
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1900	1870	1159	1900	1900	1811	1841	1900	1900	1811	1826
Adj Flow Rate, veh/h	340	1	306	3	1	4	241	294	2	0	284	250
Peak Hour Factor	0.98	0.98	0.98	0.75	0.75	0.75	0.83	0.83	0.83	0.90	0.90	0.90
Percent Heavy Veh, %	4	0	2	50	0	0	6	4	0	0	6	5
Cap, veh/h	436	2	549	138	57	154	543	1020	7	0	732	625
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.21	1.00	1.00	0.00	0.81	0.81
Sat Flow, veh/h	1389	5	1606	284	166	450	1725	1826	12	0	1811	1547
Grp Volume(v), veh/h	340	0	307	8	0	0	241	0	296	0	284	250
Grp Sat Flow(s),veh/h/ln	1389	0	1611	900	0	0	1725	0	1838	0	1811	1547
Q Serve(g_s), s	18.2	0.0	18.6	0.1	0.0	0.0	10.1	0.0	0.0	0.0	5.3	5.5
Cycle Q Clear(g_c), s	36.9	0.0	18.6	18.7	0.0	0.0	10.1	0.0	0.0	0.0	5.3	5.5
Prop In Lane	1.00		1.00	0.37		0.50	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	436	0	550	349	0	0	543	0	1026	0	732	625
V/C Ratio(X)	0.78	0.00	0.56	0.02	0.00	0.00	0.44	0.00	0.29	0.00	0.39	0.40
Avail Cap(c_a), veh/h	517	0	644	430	0	0	637	0	1026	0	732	625
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.84	0.00	0.84	0.00	0.85	0.85
Uniform Delay (d), s/veh	40.8	0.0	32.1	27.1	0.0	0.0	15.2	0.0	0.0	0.0	7.4	7.4
Incr Delay (d2), s/veh	6.4	0.0	0.9	0.0	0.0	0.0	0.5	0.0	0.6	0.0	1.3	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	0.0	7.3	0.2	0.0	0.0	3.3	0.0	0.2	0.0	1.9	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.1	0.0	33.0	27.1	0.0	0.0	15.6	0.0	0.6	0.0	8.7	9.0
LnGrp LOS	D		C	C			B		A		A	A
Approach Vol, veh/h		647			8			537			534	
Approach Delay, s/veh		40.4			27.1			7.3			8.8	
Approach LOS		D			C			A			A	

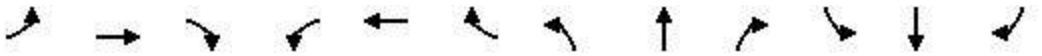
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	18.5	54.5		47.0		73.0		47.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	19.0	35.0		48.0		60.0		48.0				
Max Q Clear Time (g_c+I1), s	12.1	7.5		20.7		2.0		38.9				
Green Ext Time (p_c), s	0.4	2.6		0.0		1.9		2.1				

Intersection Summary												
HCM 7th Control Delay, s/veh			20.3									
HCM 7th LOS			C									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	163	79	302	285	239	311
Future Volume (veh/h)	163	79	302	285	239	311
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1811	1796	1826	1856	1826	1841
Adj Flow Rate, veh/h	175	85	325	306	275	357
Peak Hour Factor	0.93	0.93	0.93	0.93	0.87	0.87
Percent Heavy Veh, %	6	7	5	3	5	4
Cap, veh/h	193	94	514	484	664	1337
Arrive On Green	0.17	0.17	1.00	1.00	0.08	0.73
Sat Flow, veh/h	1112	540	865	814	1739	1841
Grp Volume(v), veh/h	261	0	0	631	275	357
Grp Sat Flow(s),veh/h/ln	1658	0	0	1679	1739	1841
Q Serve(g_s), s	18.5	0.0	0.0	0.0	7.3	7.9
Cycle Q Clear(g_c), s	18.5	0.0	0.0	0.0	7.3	7.9
Prop In Lane	0.67	0.33		0.48	1.00	
Lane Grp Cap(c), veh/h	288	0	0	998	664	1337
V/C Ratio(X)	0.91	0.00	0.00	0.63	0.41	0.27
Avail Cap(c_a), veh/h	345	0	0	998	797	1337
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.80	1.00	1.00
Uniform Delay (d), s/veh	48.6	0.0	0.0	0.0	7.5	5.6
Incr Delay (d2), s/veh	23.8	0.0	0.0	2.4	0.4	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	0.0	0.0	0.7	2.6	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	72.4	0.0	0.0	2.4	7.9	6.1
LnGrp LOS	E			A	A	A
Approach Vol, veh/h	261		631			632
Approach Delay, s/veh	72.4		2.4			6.9
Approach LOS	E		A			A

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		93.2		26.8	15.9	77.3
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		83.0		25.0	19.0	58.0
Max Q Clear Time (g_c+I1), s		9.9		20.5	9.3	2.0
Green Ext Time (p_c), s		2.3		0.3	0.6	5.2

Intersection Summary	
HCM 7th Control Delay, s/veh	16.3
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	61	7	15	63	24	3	276	13	25	623	51
Future Volume (veh/h)	99	61	7	15	63	24	3	276	13	25	623	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1900	1796	1900	1900	1900	1885	1900	1900	1885	1870
Adj Flow Rate, veh/h	112	69	8	17	72	28	3	317	15	26	642	53
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.87	0.87	0.87	0.97	0.97	0.97
Percent Heavy Veh, %	1	0	0	7	0	0	0	1	0	0	1	2
Cap, veh/h	166	83	9	52	187	66	630	1357	64	805	1305	108
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.76	0.76	0.76	1.00	1.00	1.00
Sat Flow, veh/h	808	537	59	147	1209	427	761	1785	84	1065	1718	142
Grp Volume(v), veh/h	189	0	0	117	0	0	3	0	332	26	0	695
Grp Sat Flow(s),veh/h/ln	1404	0	0	1783	0	0	761	0	1870	1065	0	1860
Q Serve(g_s), s	10.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	7.3	0.2	0.0	0.0
Cycle Q Clear(g_c), s	18.6	0.0	0.0	8.1	0.0	0.0	0.1	0.0	7.3	7.5	0.0	0.0
Prop In Lane	0.59		0.04	0.15		0.24	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	258	0	0	305	0	0	630	0	1421	805	0	1413
V/C Ratio(X)	0.73	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.23	0.03	0.00	0.49
Avail Cap(c_a), veh/h	443	0	0	519	0	0	630	0	1421	805	0	1413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.86	0.00	0.86
Uniform Delay (d), s/veh	58.3	0.0	0.0	53.5	0.0	0.0	4.1	0.0	4.9	0.3	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.4	0.1	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	0.0	3.8	0.0	0.0	0.0	0.0	2.7	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.3	0.0	0.0	54.3	0.0	0.0	4.1	0.0	5.3	0.3	0.0	1.1
LnGrp LOS	E			D			A		A	A		A
Approach Vol, veh/h		189			117			335			721	
Approach Delay, s/veh		62.3			54.3			5.3			1.0	
Approach LOS		E			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		112.4		27.6		112.4		27.6				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		89.0		39.0		89.0		39.0				
Max Q Clear Time (g_c+I1), s		9.5		10.1		9.3		20.6				
Green Ext Time (p_c), s		5.8		0.6		2.2		1.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	15.2
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	65	24	70	135	126	16	331	42	54	581	40
Future Volume (veh/h)	47	65	24	70	135	126	16	331	42	54	581	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1900	1856	1856	1856	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	61	84	31	74	142	133	18	364	46	59	638	44
Peak Hour Factor	0.77	0.77	0.77	0.95	0.95	0.95	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	3	0	3	3	3	0	2	0	0	1	0
Cap, veh/h	87	112	35	226	218	205	565	1085	137	712	1162	80
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	211	451	142	1267	881	826	771	1628	206	991	1743	120
Grp Volume(v), veh/h	176	0	0	74	0	275	18	0	410	59	0	682
Grp Sat Flow(s),veh/h/ln	804	0	0	1267	0	1707	771	0	1833	991	0	1864
Q Serve(g_s), s	11.9	0.0	0.0	0.0	0.0	20.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	32.2	0.0	0.0	13.3	0.0	20.2	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.35		0.18	1.00		0.48	1.00		0.11	1.00		0.06
Lane Grp Cap(c), veh/h	234	0	0	226	0	423	565	0	1222	712	0	1242
V/C Ratio(X)	0.75	0.00	0.00	0.33	0.00	0.65	0.03	0.00	0.34	0.08	0.00	0.55
Avail Cap(c_a), veh/h	310	0	0	292	0	512	565	0	1222	712	0	1242
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.9	0.0	0.0	44.6	0.0	47.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	7.1	0.0	0.0	0.8	0.0	2.1	0.0	0.0	0.2	0.2	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	0.0	2.2	0.0	8.8	0.0	0.0	0.1	0.0	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.0	0.0	0.0	45.5	0.0	49.3	0.0	0.0	0.2	0.2	0.0	1.8
LnGrp LOS	E			D		D	A		A	A		A
Approach Vol, veh/h		176			349			428			741	
Approach Delay, s/veh		62.0			48.5			0.2			1.6	
Approach LOS		E			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		99.3		40.7		99.3		40.7				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		86.0		42.0		86.0		42.0				
Max Q Clear Time (g_c+I1), s		2.0		34.2		2.0		22.2				
Green Ext Time (p_c), s		5.9		0.5		2.9		1.8				

Intersection Summary	
HCM 7th Control Delay, s/veh	17.2
HCM 7th LOS	B

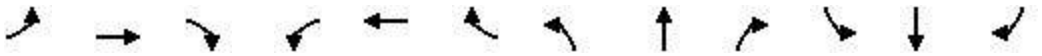
Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	133	6	29	337	26	7	4	45	6	7	8
Future Vol, veh/h	17	133	6	29	337	26	7	4	45	6	7	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	90	90	90	71	71	71	66	66	66
Heavy Vehicles, %	0	2	0	0	2	8	0	0	0	17	0	13
Mvmt Flow	20	160	7	32	374	29	10	6	63	9	11	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	403	0	0	167	0	0	649	673	84	577	662	389
Stage 1	-	-	-	-	-	-	205	205	-	453	453	-
Stage 2	-	-	-	-	-	-	444	468	-	124	208	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.9	7.555	6.5	6.395
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.355	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.755	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.6615	4	3.4235
Pot Cap-1 Maneuver	1166	-	-	1423	-	-	372	379	965	387	385	630
Stage 1	-	-	-	-	-	-	784	736	-	551	573	-
Stage 2	-	-	-	-	-	-	597	565	-	829	733	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1166	-	-	1423	-	-	338	361	965	339	367	630
Mov Cap-2 Maneuver	-	-	-	-	-	-	338	361	-	339	367	-
Stage 1	-	-	-	-	-	-	769	722	-	535	556	-
Stage 2	-	-	-	-	-	-	557	548	-	755	720	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.99	0.56	10.66	14.16
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	714	370	-	-	131	-	-	425
HCM Lane V/C Ratio	0.11	0.018	-	-	0.023	-	-	0.075
HCM Ctrl Dly (s/v)	10.7	8.1	0.1	-	7.6	0	-	14.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	101	12	210	187	23	148	1364	275	81	1297	71
Future Volume (veh/h)	87	101	12	210	187	23	148	1364	275	81	1297	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1900	1870	1856	1900	1900	1885	1885	1870	1870	1900
Adj Flow Rate, veh/h	109	126	15	244	217	27	151	1392	0	87	1395	76
Peak Hour Factor	0.80	0.80	0.80	0.86	0.86	0.86	0.98	0.98	0.98	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	0	2	3	0	0	1	1	2	2	0
Cap, veh/h	181	167	20	246	245	213	250	3208		287	2089	114
Arrive On Green	0.06	0.10	0.10	0.09	0.13	0.13	0.04	0.62	0.00	0.03	0.61	0.61
Sat Flow, veh/h	1810	1627	194	1781	1856	1610	1810	5147	1598	1781	3427	186
Grp Volume(v), veh/h	109	0	141	244	217	27	151	1392	0	87	722	749
Grp Sat Flow(s),veh/h/ln	1810	0	1821	1781	1856	1610	1810	1716	1598	1781	1777	1837
Q Serve(g_s), s	8.2	0.0	12.1	15.0	18.4	2.4	5.0	22.3	0.0	2.8	42.7	43.1
Cycle Q Clear(g_c), s	8.2	0.0	12.1	15.0	18.4	2.4	5.0	22.3	0.0	2.8	42.7	43.1
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	181	0	186	246	245	213	250	3208		287	1083	1119
V/C Ratio(X)	0.60	0.00	0.76	0.99	0.88	0.13	0.60	0.43		0.30	0.67	0.67
Avail Cap(c_a), veh/h	223	0	319	246	336	292	271	3208		333	1083	1119
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.93	0.93	0.93	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	0.0	69.9	63.4	68.2	61.3	20.3	15.6	0.0	12.1	20.5	20.6
Incr Delay (d2), s/veh	3.2	0.0	6.1	53.3	17.4	0.2	3.3	0.1	0.0	0.6	3.2	3.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	5.9	6.3	9.9	1.0	2.5	8.7	0.0	1.2	18.3	19.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.4	0.0	76.0	116.7	85.7	61.5	23.6	15.7	0.0	12.7	23.8	23.8
LnGrp LOS	E		E	F	F	E	C	B		B	C	C
Approach Vol, veh/h		250			488			1543			1558	
Approach Delay, s/veh		68.8			99.8			16.4			23.2	
Approach LOS		E			F			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	103.5	21.0	22.4	10.9	105.7	16.2	27.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	84.0	15.0	28.0	9.0	84.0	14.0	29.0
Max Q Clear Time (g_c+I1), s	7.0	45.1	17.0	14.1	4.8	24.3	10.2	20.4
Green Ext Time (p_c), s	0.1	14.1	0.0	0.5	0.1	14.6	0.1	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	33.2
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	323	57	57	311	144	23	176	51	92	185	30
Future Volume (vph)	56	323	57	57	311	144	23	176	51	92	185	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00		1.00	
Frt		0.98			0.96			1.00	0.85		0.99	
Flt Protected		0.99			0.99			0.99	1.00		0.99	
Satd. Flow (prot)		3456			3359			1889	1583		1847	
Flt Permitted		0.79			0.83			0.93	1.00		0.72	
Satd. Flow (perm)		2753			2788			1770	1583		1354	
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.81	0.81	0.81
Adj. Flow (vph)	63	363	64	67	366	169	26	198	57	114	228	37
RTOR Reduction (vph)	0	8	0	0	26	0	0	0	37	0	4	0
Lane Group Flow (vph)	0	482	0	0	576	0	0	224	20	0	375	0
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%	0%	0%	2%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4		4	8		
Actuated Green, G (s)		65.3			65.3			42.7	42.7		42.7	
Effective Green, g (s)		65.3			65.3			42.7	42.7		42.7	
Actuated g/C Ratio		0.54			0.54			0.36	0.36		0.36	
Clearance Time (s)		6.0			6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1498			1517			629	563		481	
v/s Ratio Prot												
v/s Ratio Perm		0.18			c0.21			0.13	0.01		c0.28	
v/c Ratio		0.32			0.38			0.36	0.04		0.78	
Uniform Delay, d1		15.1			15.7			28.5	25.2		34.5	
Progression Factor		1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.6			0.7			0.3	0.0		7.8	
Delay (s)		15.7			16.4			28.9	25.2		42.3	
Level of Service		B			B			C	C		D	
Approach Delay (s/veh)		15.7			16.4			28.1			42.3	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	497	8	4	661
Future Vol, veh/h	7	7	497	8	4	661
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	89	89	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	12	12	558	9	4	726

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1298	563	0	0	567	0
Stage 1	563	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	180	530	-	-	1015	-
Stage 1	574	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	179	530	-	-	1015	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	476	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.64	0	0.05
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	398	1015	-
HCM Lane V/C Ratio	-	-	0.061	0.004	-
HCM Ctrl Dly (s/v)	-	-	14.6	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	2	8	50	12	6
Future Vol, veh/h	11	2	8	50	12	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	20	0	0	4	9	0
Mvmt Flow	12	2	9	54	13	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	63	0	-	0	62	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	26	-
Critical Hdwy	4.3	-	-	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.38	-	-	-	3.581	3.3
Pot Cap-1 Maneuver	1432	-	-	-	927	1043
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	979	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1432	-	-	-	919	1043
Mov Cap-2 Maneuver	-	-	-	-	919	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	979	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	6.38	0	8.84
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1431	-	-	-	957
HCM Lane V/C Ratio	0.008	-	-	-	0.02
HCM Ctrl Dly (s/v)	7.5	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	5.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	12	2	11	39	1
Future Vol, veh/h	2	12	2	11	39	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	9	0	0	5	0
Mvmt Flow	2	13	2	12	42	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	15	0	25	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	-	-	4.1	-	6.45	6.2
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.3
Pot Cap-1 Maneuver	-	-	1616	-	983	1079
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1616	-	982	1079
Mov Cap-2 Maneuver	-	-	-	-	982	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.11	8.83
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	984	-	-	277	-
HCM Lane V/C Ratio	0.044	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.8	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	37	459	84	60	621
Future Vol, veh/h	51	37	459	84	60	621
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	94	94	96	96
Heavy Vehicles, %	0	0	2	0	2	1
Mvmt Flow	56	41	488	89	63	647

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1305	533	0	0	578	0
Stage 1	533	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	178	551	-	-	996	-
Stage 1	593	-	-	-	-	-
Stage 2	459	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	167	551	-	-	996	-
Mov Cap-2 Maneuver	301	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	431	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	18.04	0	0.78
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	372	996	-
HCM Lane V/C Ratio	-	-	0.26	0.063	-
HCM Ctrl Dly (s/v)	-	-	18	8.9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1	0.2	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	147	8	9	45	9	51
Future Vol, veh/h	147	8	9	45	9	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	81	81	76	76
Heavy Vehicles, %	1	0	11	0	0	2
Mvmt Flow	175	10	11	56	12	67

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	185	0	258	180
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	78	-
Critical Hdwy	-	-	4.21	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.299	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1338	-	736	863
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1338	-	729	863
Mov Cap-2 Maneuver	-	-	-	-	729	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	942	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.29	9.73
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	840	-	-	300	-
HCM Lane V/C Ratio	0.094	-	-	0.008	-
HCM Ctrl Dly (s/v)	9.7	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	5	76	4	1	34	4	1486	25	29	1398	61
Future Volume (veh/h)	97	5	76	4	1	34	4	1486	25	29	1398	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1856	1900	1900	1900	1530	1885	1900	1900	1870	1870
Adj Flow Rate, veh/h	124	6	97	6	2	55	5	1689	28	33	1607	70
Peak Hour Factor	0.78	0.78	0.78	0.62	0.62	0.62	0.88	0.88	0.88	0.87	0.87	0.87
Percent Heavy Veh, %	2	0	3	0	0	0	25	1	0	0	2	2
Cap, veh/h	144	16	260	29	6	72	25	2438	40	207	2621	114
Arrive On Green	0.08	0.17	0.17	0.05	0.05	0.05	0.69	0.69	0.69	0.05	1.00	1.00
Sat Flow, veh/h	1781	95	1530	84	120	1405	3	3514	58	1810	3470	151
Grp Volume(v), veh/h	124	0	103	63	0	0	901	0	821	33	820	857
Grp Sat Flow(s),veh/h/ln	1781	0	1625	1609	0	0	1870	0	1705	1810	1777	1843
Q Serve(g_s), s	11.0	0.0	9.0	2.5	0.0	0.0	0.0	0.0	45.5	0.8	0.0	0.0
Cycle Q Clear(g_c), s	11.0	0.0	9.0	6.2	0.0	0.0	44.9	0.0	45.5	0.8	0.0	0.0
Prop In Lane	1.00		0.94	0.10		0.87	0.01		0.03	1.00		0.08
Lane Grp Cap(c), veh/h	144	0	276	107	0	0	1320	0	1183	207	1342	1392
V/C Ratio(X)	0.86	0.00	0.37	0.59	0.00	0.00	0.68	0.00	0.69	0.16	0.61	0.62
Avail Cap(c_a), veh/h	156	0	294	115	0	0	1320	0	1183	344	1342	1392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.53	0.53	0.53
Uniform Delay (d), s/veh	72.6	0.0	58.9	74.9	0.0	0.0	14.4	0.0	14.5	13.4	0.0	0.0
Incr Delay (d2), s/veh	33.6	0.0	0.8	6.8	0.0	0.0	2.9	0.0	3.4	0.2	1.1	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	3.8	2.8	0.0	0.0	19.2	0.0	17.7	0.4	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	106.2	0.0	59.7	81.7	0.0	0.0	17.2	0.0	17.8	13.6	1.1	1.1
LnGrp LOS	F		E	F			B		B	B	A	A
Approach Vol, veh/h		227			63			1722			1710	
Approach Delay, s/veh		85.1			81.7			17.5			1.3	
Approach LOS		F			F			B			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		126.9		33.1	9.8	117.0	19.0	14.2				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		119.0		29.0	16.0	97.0	14.0	9.0				
Max Q Clear Time (g_c+I1), s		2.0		11.0	2.8	47.5	13.0	8.2				
Green Ext Time (p_c), s		22.5		0.5	0.0	20.7	0.0	0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			15.3									
HCM 7th LOS			B									

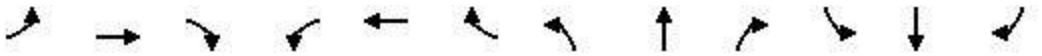
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	17	8	233	25	261	37	424	104	206	597	39
Future Volume (veh/h)	33	17	8	233	25	261	37	424	104	206	597	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1900	1885	1841	1885	1900	1870	1900	1870	1885	1781
Adj Flow Rate, veh/h	38	20	9	256	27	287	39	446	109	210	609	40
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.95	0.95	0.95	0.98	0.98	0.98
Percent Heavy Veh, %	3	0	0	1	4	1	0	2	0	2	1	8
Cap, veh/h	49	26	12	311	33	312	393	746	182	433	1099	72
Arrive On Green	0.05	0.05	0.05	0.20	0.20	0.20	0.51	0.51	0.51	0.07	0.63	0.63
Sat Flow, veh/h	1024	539	242	1593	168	1598	795	1452	355	1781	1750	115
Grp Volume(v), veh/h	67	0	0	283	0	287	39	0	555	210	0	649
Grp Sat Flow(s),veh/h/ln	1805	0	0	1761	0	1598	795	0	1806	1781	0	1864
Q Serve(g_s), s	5.1	0.0	0.0	21.6	0.0	24.7	4.1	0.0	30.2	7.8	0.0	27.8
Cycle Q Clear(g_c), s	5.1	0.0	0.0	21.6	0.0	24.7	15.9	0.0	30.2	7.8	0.0	27.8
Prop In Lane	0.57		0.13	0.90		1.00	1.00		0.20	1.00		0.06
Lane Grp Cap(c), veh/h	87	0	0	344	0	312	393	0	929	433	0	1171
V/C Ratio(X)	0.77	0.00	0.00	0.82	0.00	0.92	0.10	0.00	0.60	0.48	0.00	0.55
Avail Cap(c_a), veh/h	181	0	0	365	0	331	393	0	929	484	0	1171
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.49	0.00	0.49	1.00	0.00	1.00	0.77	0.00	0.77
Uniform Delay (d), s/veh	65.9	0.0	0.0	54.0	0.0	55.3	24.0	0.0	23.9	18.0	0.0	14.9
Incr Delay (d2), s/veh	13.5	0.0	0.0	7.1	0.0	17.3	0.5	0.0	2.8	0.6	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	10.2	0.0	11.4	0.8	0.0	13.4	3.2	0.0	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.4	0.0	0.0	61.1	0.0	72.6	24.5	0.0	26.7	18.6	0.0	16.3
LnGrp LOS	E			E		E	C		C	B		B
Approach Vol, veh/h		67			570			594			859	
Approach Delay, s/veh		79.4			66.9			26.6			16.9	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	2	4	5	6	8
Phs Duration (G+Y+Rc), s	93.9	12.7	16.0	78.0	33.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	79.0	14.0	14.0	59.0	29.0
Max Q Clear Time (g_c+I1), s	29.8	7.1	9.8	32.2	26.7
Green Ext Time (p_c), s	5.0	0.1	0.2	4.1	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	35.3
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	217	57	217	394	26	78	1223	91	9	950	102
Future Volume (vph)	69	217	57	217	394	26	78	1223	91	9	950	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1798		1770	1847		1787	3505		1805	3485	
Flt Permitted	0.15	1.00		0.26	1.00		0.09	1.00		0.05	1.00	
Satd. Flow (perm)	285	1798		488	1847		165	3505		104	3485	
Peak-hour factor, PHF	0.81	0.81	0.81	0.91	0.91	0.91	0.95	0.95	0.95	0.84	0.84	0.84
Adj. Flow (vph)	85	268	70	238	433	29	82	1287	96	11	1131	121
RTOR Reduction (vph)	0	6	0	0	1	0	0	4	0	0	5	0
Lane Group Flow (vph)	85	332	0	238	461	0	82	1379	0	11	1247	0
Heavy Vehicles (%)	3%	2%	4%	2%	2%	0%	1%	2%	1%	0%	2%	3%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		Perm	NA	
Protected Phases	3	8		7	4		1	6			2	
Permitted Phases	4			8			2			2		
Actuated Green, G (s)	58.0	40.7		58.0	47.6		78.0	62.0		73.0	73.0	
Effective Green, g (s)	58.0	40.7		58.0	47.6		78.0	62.0		73.0	73.0	
Actuated g/C Ratio	0.36	0.25		0.36	0.30		0.49	0.39		0.46	0.46	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	198	457		315	549		131	1358		47	1590	
v/s Ratio Prot	0.03	0.18		c0.08	c0.25		c0.02	c0.39			c0.36	
v/s Ratio Perm	0.13			0.19			0.29			0.11		
v/c Ratio	0.43	0.73		0.76	0.84		0.63	1.02		0.23	0.78	
Uniform Delay, d1	37.9	54.6		39.5	52.6		29.6	49.0		26.5	36.8	
Progression Factor	1.00	1.00		1.51	0.26		1.37	0.91		0.36	0.45	
Incremental Delay, d2	1.5	5.7		1.0	1.1		6.3	24.2		1.0	0.4	
Delay (s)	39.4	60.2		60.6	15.0		47.0	69.0		10.6	17.1	
Level of Service	D	E		E	B		D	E		B	B	
Approach Delay (s/veh)		56.0			30.5			67.8			17.0	
Approach LOS		E			C			E			B	

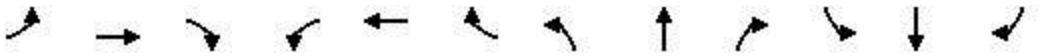
Intersection Summary			
HCM 2000 Control Delay (s/veh)	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	251	82	29	635	75	53	183	34	26	143	0
Future Volume (vph)	4	251	82	29	635	75	53	183	34	26	143	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frt		0.97		1.00	0.98			1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		1780		1805	1821			1862	1524	1805	1881	
Flt Permitted		0.57		0.21	1.00			0.88	1.00	0.42	1.00	
Satd. Flow (perm)		1013		394	1821			1654	1524	804	1881	
Peak-hour factor, PHF	0.85	0.85	0.85	0.91	0.91	0.91	0.73	0.73	0.73	0.79	0.79	0.79
Adj. Flow (vph)	5	295	96	32	698	82	73	251	47	33	181	0
RTOR Reduction (vph)	0	7	0	0	2	0	0	0	29	0	0	0
Lane Group Flow (vph)	0	389	0	32	778	0	0	324	18	33	181	0
Heavy Vehicles (%)	0%	3%	4%	0%	3%	0%	4%	0%	6%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	6		
Actuated Green, G (s)		40.7		47.6	47.6			62.0	62.0	78.0	73.0	
Effective Green, g (s)		40.7		47.6	47.6			62.0	62.0	78.0	73.0	
Actuated g/C Ratio		0.25		0.30	0.30			0.39	0.39	0.49	0.46	
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		257		117	541			640	590	492	858	
v/s Ratio Prot					c0.43					c0.01	c0.10	
v/s Ratio Perm		0.38		0.08				c0.20	0.01	0.03		
v/c Ratio		1.51		0.27	1.44			0.51	0.03	0.07	0.21	
Uniform Delay, d1		59.7		43.0	56.2			37.3	30.4	22.2	26.2	
Progression Factor		0.49		1.00	1.00			1.00	1.00	0.16	0.21	
Incremental Delay, d2		243.0		1.3	207.4			2.8	0.1	0.0	0.1	
Delay (s)		272.0		44.2	263.6			40.2	30.5	3.6	5.6	
Level of Service		F		D	F			D	C	A	A	
Approach Delay (s/veh)		272.0			255.0			39.0			5.3	
Approach LOS		F			F			D			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	184.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	269	1326	0	181	1065
Future Volume (vph)	0	269	1326	0	181	1065
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.95		0.91	0.91
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2814	3539		1626	3388
Flt Permitted		1.00	1.00		0.95	0.69
Satd. Flow (perm)		2814	3539		1626	2333
Peak-hour factor, PHF	0.82	0.82	0.95	0.95	0.89	0.89
Adj. Flow (vph)	0	328	1396	0	203	1197
RTOR Reduction (vph)	0	295	0	0	0	0
Lane Group Flow (vph)	0	33	1396	0	183	1217
Heavy Vehicles (%)	0%	1%	2%	0%	1%	2%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		16.0	62.0		16.0	84.0
Effective Green, g (s)		16.0	62.0		16.0	84.0
Actuated g/C Ratio		0.10	0.39		0.10	0.53
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		281	1371		162	1330
v/s Ratio Prot		0.01	c0.39		c0.11	c0.09
v/s Ratio Perm						0.39
v/c Ratio		0.12	1.02		1.13	0.92
Uniform Delay, d1		65.6	49.0		72.0	34.7
Progression Factor		1.00	0.32		1.00	1.00
Incremental Delay, d2		0.1	18.0		109.8	9.9
Delay (s)		65.7	33.7		181.8	44.6
Level of Service		E	C		F	D
Approach Delay (s/veh)	65.7		33.7			62.6
Approach LOS	E		C			E

Intersection Summary			
HCM 2000 Control Delay (s/veh)	50.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	259	1	229	3	9	8	233	411	9	2	530	245
Future Volume (veh/h)	259	1	229	3	9	8	233	411	9	2	530	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1856	1900	1900	1707	1856	1856	1900	1900	1870	1856
Adj Flow Rate, veh/h	301	1	266	3	10	9	268	472	10	2	589	272
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	1	0	3	0	0	13	3	3	0	0	2	3
Cap, veh/h	354	2	493	67	216	176	485	1099	23	26	870	732
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.20	1.00	1.00	0.93	0.93	0.93
Sat Flow, veh/h	1404	6	1605	123	703	572	1767	1810	38	1	1868	1572
Grp Volume(v), veh/h	301	0	267	22	0	0	268	0	482	591	0	272
Grp Sat Flow(s),veh/h/ln	1404	0	1611	1398	0	0	1767	0	1849	1869	0	1572
Q Serve(g_s), s	23.5	0.0	19.3	0.1	0.0	0.0	11.8	0.0	0.0	0.0	0.0	2.6
Cycle Q Clear(g_c), s	42.8	0.0	19.3	19.4	0.0	0.0	11.8	0.0	0.0	8.3	0.0	2.6
Prop In Lane	1.00		1.00	0.14		0.41	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h	354	0	495	459	0	0	485	0	1122	896	0	732
V/C Ratio(X)	0.85	0.00	0.54	0.05	0.00	0.00	0.55	0.00	0.43	0.66	0.00	0.37
Avail Cap(c_a), veh/h	354	0	495	459	0	0	487	0	1122	896	0	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.78	0.00	0.78	0.64	0.00	0.64
Uniform Delay (d), s/veh	53.5	0.0	40.3	34.2	0.0	0.0	14.5	0.0	0.0	2.9	0.0	2.7
Incr Delay (d2), s/veh	17.6	0.0	1.2	0.0	0.0	0.0	1.1	0.0	0.9	2.5	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.0	7.8	0.5	0.0	0.0	3.9	0.0	0.3	2.0	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	71.1	0.0	41.5	34.3	0.0	0.0	15.5	0.0	0.9	5.3	0.0	3.6
LnGrp LOS	E		D	C			B		A	A		A
Approach Vol, veh/h		568			22			750			863	
Approach Delay, s/veh		57.2			34.3			6.2			4.8	
Approach LOS		E			C			A			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	19.8	71.2		49.0		91.0		49.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	14.0	65.0		43.0		85.0		43.0				
Max Q Clear Time (g_c+I1), s	13.8	10.3		21.4		2.0		44.8				
Green Ext Time (p_c), s	0.0	5.5		0.1		3.4		0.0				

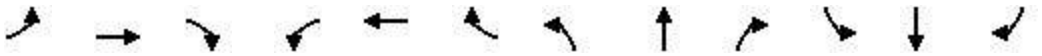
Intersection Summary												
HCM 7th Control Delay, s/veh			19.1									
HCM 7th LOS			B									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	263	186	452	226	162	499
Future Volume (veh/h)	263	186	452	226	162	499
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	277	196	491	246	200	616
Peak Hour Factor	0.95	0.95	0.92	0.92	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	289	204	600	301	543	1165
Arrive On Green	0.29	0.29	1.00	1.00	0.07	0.62
Sat Flow, veh/h	990	701	1175	589	1781	1870
Grp Volume(v), veh/h	474	0	0	737	200	616
Grp Sat Flow(s),veh/h/ln	1695	0	0	1764	1781	1870
Q Serve(g_s), s	38.5	0.0	0.0	0.0	7.4	25.9
Cycle Q Clear(g_c), s	38.5	0.0	0.0	0.0	7.4	25.9
Prop In Lane	0.58	0.41		0.33	1.00	
Lane Grp Cap(c), veh/h	494	0	0	901	543	1165
V/C Ratio(X)	0.96	0.00	0.00	0.82	0.37	0.53
Avail Cap(c_a), veh/h	508	0	0	901	610	1165
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.79	1.00	1.00
Uniform Delay (d), s/veh	48.8	0.0	0.0	0.0	13.9	14.9
Incr Delay (d2), s/veh	29.5	0.0	0.0	6.6	0.4	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.1	0.0	0.0	1.6	3.0	11.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	78.3	0.0	0.0	6.6	14.3	16.6
LnGrp LOS	E			A	B	B
Approach Vol, veh/h	474		737			816
Approach Delay, s/veh	78.3		6.6			16.0
Approach LOS	E		A			B

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		93.2		46.8	15.7	77.5
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		86.0		42.0	15.0	65.0
Max Q Clear Time (g_c+I1), s		27.9		40.5	9.4	2.0
Green Ext Time (p_c), s		4.7		0.3	0.3	6.5

Intersection Summary	
HCM 7th Control Delay, s/veh	27.1
HCM 7th LOS	C

2030 BUILD SYNCHRO REPORTS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	67	5	3	34	5	4	261	13	29	185	22
Future Volume (veh/h)	116	67	5	3	34	5	4	261	13	29	185	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1811	1307	1900	1856	1900	1900	1870	1900	1900	1856	1781
Adj Flow Rate, veh/h	129	74	6	4	48	7	4	269	13	39	250	30
Peak Hour Factor	0.90	0.90	0.90	0.71	0.71	0.71	0.97	0.97	0.97	0.74	0.74	0.74
Percent Heavy Veh, %	9	6	40	0	3	0	0	2	0	0	3	8
Cap, veh/h	196	89	7	38	252	35	885	1307	63	831	1201	144
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.74	0.74	0.74	1.00	1.00	1.00
Sat Flow, veh/h	917	549	43	39	1559	215	1117	1769	86	1115	1625	195
Grp Volume(v), veh/h	209	0	0	59	0	0	4	0	282	39	0	280
Grp Sat Flow(s),veh/h/ln	1509	0	0	1813	0	0	1117	0	1855	1115	0	1820
Q Serve(g_s), s	12.7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	5.6	0.3	0.0	0.0
Cycle Q Clear(g_c), s	16.0	0.0	0.0	3.4	0.0	0.0	0.1	0.0	5.6	5.9	0.0	0.0
Prop In Lane	0.62		0.03	0.07		0.12	1.00		0.05	1.00		0.11
Lane Grp Cap(c), veh/h	292	0	0	325	0	0	885	0	1370	831	0	1345
V/C Ratio(X)	0.72	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.21	0.05	0.00	0.21
Avail Cap(c_a), veh/h	700	0	0	820	0	0	885	0	1370	831	0	1345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	48.7	0.0	0.0	43.6	0.0	0.0	4.1	0.0	4.8	0.2	0.0	0.0
Incr Delay (d2), s/veh	3.3	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	0.0	1.6	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.9	0.0	0.0	43.9	0.0	0.0	4.1	0.0	5.2	0.3	0.0	0.3
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		209			59			286			319	
Approach Delay, s/veh		51.9			43.9			5.2			0.3	
Approach LOS		D			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		94.6		25.4		94.6		25.4				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		55.0		53.0		55.0		53.0				
Max Q Clear Time (g_c+I1), s		7.9		5.4		7.6		18.0				
Green Ext Time (p_c), s		1.9		0.3		1.8		1.3				

Intersection Summary	
HCM 7th Control Delay, s/veh	17.2
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	112	24	28	91	118	14	340	95	100	201	13
Future Volume (veh/h)	44	112	24	28	91	118	14	340	95	100	201	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1811	1767	1900	1826	1752	1900	1811	1826	1781	1796	1781
Adj Flow Rate, veh/h	52	133	29	35	114	148	15	370	103	116	234	15
Peak Hour Factor	0.84	0.84	0.84	0.80	0.80	0.80	0.92	0.92	0.92	0.86	0.86	0.86
Percent Heavy Veh, %	2	6	9	0	5	10	0	6	5	8	7	8
Cap, veh/h	75	175	33	207	176	229	813	894	249	635	1095	70
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	155	716	137	1243	721	936	1149	1363	380	877	1670	107
Grp Volume(v), veh/h	214	0	0	35	0	262	15	0	473	116	0	249
Grp Sat Flow(s),veh/h/ln	1008	0	0	1243	0	1657	1149	0	1743	877	0	1777
Q Serve(g_s), s	9.3	0.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	26.4	0.0	0.0	6.4	0.0	17.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.24		0.14	1.00		0.56	1.00		0.22	1.00		0.06
Lane Grp Cap(c), veh/h	283	0	0	207	0	405	813	0	1143	635	0	1166
V/C Ratio(X)	0.76	0.00	0.00	0.17	0.00	0.65	0.02	0.00	0.41	0.18	0.00	0.21
Avail Cap(c_a), veh/h	432	0	0	328	0	566	813	0	1143	635	0	1166
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.98	0.00	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.7	0.0	0.0	36.7	0.0	40.7	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0	0.4	0.0	1.7	0.0	0.0	0.2	0.6	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	0.0	0.9	0.0	7.1	0.0	0.0	0.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.8	0.0	0.0	37.1	0.0	42.5	0.0	0.0	0.2	0.6	0.0	0.4
LnGrp LOS	D			D		D	A		A	A		A
Approach Vol, veh/h		214			297			488			365	
Approach Delay, s/veh		48.8			41.8			0.2			0.5	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	84.7	35.3	84.7	35.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	67.0	41.0	67.0	41.0
Max Q Clear Time (g_c+I1), s	2.0	28.4	2.0	19.0
Green Ext Time (p_c), s	2.3	0.9	3.5	1.6

Intersection Summary	
HCM 7th Control Delay, s/veh	17.0
HCM 7th LOS	B

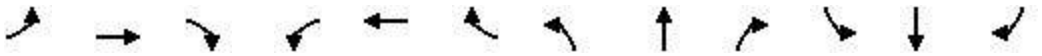
Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	272	11	18	240	48	6	4	69	28	5	3
Future Vol, veh/h	23	272	11	18	240	48	6	4	69	28	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	88	88	88	86	86	86	46	46	46
Heavy Vehicles, %	9	6	0	12	8	8	0	0	2	33	0	0
Mvmt Flow	28	336	14	20	273	55	7	5	80	61	11	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	327	0	0	349	0	0	718	768	175	568	747	300
Stage 1	-	-	-	-	-	-	399	399	-	341	341	-
Stage 2	-	-	-	-	-	-	319	368	-	227	406	-
Critical Hdwy	4.235	-	-	4.28	-	-	7.3	6.5	6.93	7.795	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.595	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.995	5.5	-
Follow-up Hdwy	2.2855	-	-	2.314	-	-	3.5	4	3.319	3.8135	4	3.3
Pot Cap-1 Maneuver	1187	-	-	1147	-	-	333	335	839	367	344	744
Stage 1	-	-	-	-	-	-	603	605	-	602	642	-
Stage 2	-	-	-	-	-	-	697	625	-	683	601	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1187	-	-	1147	-	-	304	319	839	312	327	744
Mov Cap-2 Maneuver	-	-	-	-	-	-	304	319	-	312	327	-
Stage 1	-	-	-	-	-	-	587	589	-	589	628	-
Stage 2	-	-	-	-	-	-	664	611	-	597	585	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.77	0.48	11.02	19.27
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	690	257	-	-	102	-	-	330
HCM Lane V/C Ratio	0.133	0.024	-	-	0.018	-	-	0.237
HCM Ctrl Dly (s/v)	11	8.1	0.2	-	8.2	0	-	19.3
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	0.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	254	20	89	156	36	69	992	377	135	985	65
Future Volume (veh/h)	143	254	20	89	156	36	69	992	377	135	985	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1159	1737	1767	1900	1693	1841	1870	1870	1856	1841
Adj Flow Rate, veh/h	146	259	20	93	162	38	73	1055	0	139	1015	67
Peak Hour Factor	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.97	0.97	0.97
Percent Heavy Veh, %	4	5	50	11	9	0	14	4	2	2	3	4
Cap, veh/h	272	290	22	171	258	236	282	2746		368	1890	125
Arrive On Green	0.09	0.17	0.17	0.06	0.15	0.15	0.03	0.55	0.00	0.05	0.56	0.56
Sat Flow, veh/h	1753	1673	129	1654	1767	1610	1612	5025	1585	1781	3357	222
Grp Volume(v), veh/h	146	0	279	93	162	38	73	1055	0	139	533	549
Grp Sat Flow(s),veh/h/ln	1753	0	1803	1654	1767	1610	1612	1675	1585	1781	1763	1816
Q Serve(g_s), s	9.8	0.0	21.2	6.4	12.1	2.9	2.7	16.9	0.0	4.8	26.5	26.5
Cycle Q Clear(g_c), s	9.8	0.0	21.2	6.4	12.1	2.9	2.7	16.9	0.0	4.8	26.5	26.5
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	272	0	313	171	258	236	282	2746		368	992	1022
V/C Ratio(X)	0.54	0.00	0.89	0.54	0.63	0.16	0.26	0.38		0.38	0.54	0.54
Avail Cap(c_a), veh/h	422	0	438	180	258	236	331	2746		521	992	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.98	0.98	0.98	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.6	0.0	56.6	45.5	56.2	52.2	14.9	18.2	0.0	13.7	19.2	19.2
Incr Delay (d2), s/veh	1.6	0.0	15.5	2.9	4.6	0.3	0.5	0.1	0.0	0.6	2.1	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	10.9	2.8	5.7	1.2	1.0	6.5	0.0	2.0	11.2	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.3	0.0	72.1	48.4	60.8	52.6	15.4	18.3	0.0	14.4	21.3	21.2
LnGrp LOS	D		E	D	E	D	B	B		B	C	C
Approach Vol, veh/h		425			293			1128			1221	
Approach Delay, s/veh		63.6			55.8			18.1			20.4	
Approach LOS		E			E			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	84.8	14.2	30.3	13.0	82.5	18.0	26.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	64.0	9.0	34.0	19.0	54.0	24.0	19.0
Max Q Clear Time (g_c+I1), s	4.7	28.5	8.4	23.2	6.8	18.9	11.8	14.1
Green Ext Time (p_c), s	0.0	8.4	0.0	1.1	0.3	8.9	0.3	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	28.9
HCM 7th LOS	C

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	658	49	15	278	47	20	30	22	181	60	26
Future Volume (vph)	43	658	49	15	278	47	20	30	22	181	60	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00		1.00	
Frt		0.99			0.98			1.00	0.85		0.99	
Flt Protected		1.00			1.00			0.98	1.00		0.97	
Satd. Flow (prot)		3427			3296			1788	1615		1748	
Flt Permitted		0.89			0.90			0.84	1.00		0.76	
Satd. Flow (perm)		3071			2967			1533	1615		1378	
Peak-hour factor, PHF	0.92	0.92	0.92	0.76	0.76	0.76	0.90	0.90	0.90	0.92	0.92	0.92
Adj. Flow (vph)	47	715	53	20	366	62	22	33	24	197	65	28
RTOR Reduction (vph)	0	3	0	0	8	0	0	0	17	0	4	0
Lane Group Flow (vph)	0	812	0	0	440	0	0	55	7	0	286	0
Heavy Vehicles (%)	3%	4%	5%	7%	7%	7%	0%	7%	0%	3%	5%	6%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4		4	8		
Actuated Green, G (s)		72.8			72.8			35.2	35.2		35.2	
Effective Green, g (s)		72.8			72.8			35.2	35.2		35.2	
Actuated g/C Ratio		0.61			0.61			0.29	0.29		0.29	
Clearance Time (s)		6.0			6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1863			1799			449	473		404	
v/s Ratio Prot												
v/s Ratio Perm		c0.26			0.15			0.04	0.00		c0.21	
v/c Ratio		0.44			0.24			0.12	0.01		0.71	
Uniform Delay, d1		12.6			10.9			31.1	30.1		37.8	
Progression Factor		1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.7			0.3			0.1	0.0		5.6	
Delay (s)		13.4			11.2			31.2	30.1		43.4	
Level of Service		B			B			C	C		D	
Approach Delay (s/veh)		13.4			11.2			30.9			43.4	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	24	475	27	22	291
Future Vol, veh/h	24	24	475	27	22	291
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	93	93	91	91
Heavy Vehicles, %	20	25	6	25	20	7
Mvmt Flow	32	32	511	29	24	320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	893	525	0	0	540	0
Stage 1	525	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Critical Hdwy	6.6	6.45	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.525	-	-	2.38	-
Pot Cap-1 Maneuver	290	510	-	-	944	-
Stage 1	558	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	283	510	-	-	944	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	558	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.35	0	0.63
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	449	944	-
HCM Lane V/C Ratio	-	-	0.143	0.026	-
HCM Ctrl Dly (s/v)	-	-	14.3	8.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	13	7	53	17	18
Future Vol, veh/h	18	13	7	53	17	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	25	14	7	22	0
Mvmt Flow	20	14	8	58	18	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	65	0	-	0	90	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	53	-
Critical Hdwy	4.1	-	-	-	6.62	6.2
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	2.2	-	-	-	3.698	3.3
Pot Cap-1 Maneuver	1550	-	-	-	864	1042
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	921	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1550	-	-	-	853	1042
Mov Cap-2 Maneuver	-	-	-	-	853	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	921	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	4.27	0	8.99
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1045	-	-	-	941
HCM Lane V/C Ratio	0.013	-	-	-	0.04
HCM Ctrl Dly (s/v)	7.4	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	21	3	4	56	4
Future Vol, veh/h	9	21	3	4	56	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	17	0	0	9	0
Mvmt Flow	10	23	3	4	61	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	33	0	32	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.2	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1592	-	964	1062
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1592	-	962	1062
Mov Cap-2 Maneuver	-	-	-	-	962	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.11	8.99
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	968	-	-	771	-
HCM Lane V/C Ratio	0.067	-	-	0.002	-
HCM Ctrl Dly (s/v)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	29	437	99	48	300
Future Vol, veh/h	19	29	437	99	48	300
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	95	95	88	88
Heavy Vehicles, %	6	11	8	2	0	7
Mvmt Flow	25	38	460	104	55	341

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	962	512	0	0	564	0
Stage 1	512	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Critical Hdwy	6.46	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	279	544	-	-	1018	-
Stage 1	594	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	264	544	-	-	1018	-
Mov Cap-2 Maneuver	393	-	-	-	-	-
Stage 1	594	-	-	-	-	-
Stage 2	600	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.78	0	1.21
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	472	1018	-
HCM Lane V/C Ratio	-	-	0.132	0.054	-
HCM Ctrl Dly (s/v)	-	-	13.8	8.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.2	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	126	12	23	26	17	55
Future Vol, veh/h	126	12	23	26	17	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	55	55	69	69
Heavy Vehicles, %	1	0	29	8	0	11
Mvmt Flow	158	15	42	47	25	80

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	173	0	296	165
Stage 1	-	-	-	-	165	-
Stage 2	-	-	-	-	131	-
Critical Hdwy	-	-	4.39	-	6.4	6.31
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.461	-	3.5	3.399
Pot Cap-1 Maneuver	-	-	1257	-	699	857
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	900	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1257	-	676	857
Mov Cap-2 Maneuver	-	-	-	-	676	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	869	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.74	10.13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	806	-	-	845	-
HCM Lane V/C Ratio	0.13	-	-	0.033	-
HCM Ctrl Dly (s/v)	10.1	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	0	61	2	0	7	2	1185	13	27	1105	65
Future Volume (veh/h)	68	0	61	2	0	7	2	1185	13	27	1105	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1811	1900	1900	1900	1900	1900	1841	1900	1900	1856	1767
Adj Flow Rate, veh/h	85	0	76	4	0	12	2	1222	13	30	1242	73
Peak Hour Factor	0.80	0.80	0.80	0.56	0.56	0.56	0.97	0.97	0.97	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	0	0	0	0	0	4	0	0	3	9
Cap, veh/h	106	0	212	41	5	41	26	2459	26	348	2627	154
Arrive On Green	0.06	0.00	0.14	0.03	0.00	0.03	0.71	0.71	0.71	0.05	1.00	1.00
Sat Flow, veh/h	1753	0	1535	248	148	1188	1	3468	37	1810	3384	199
Grp Volume(v), veh/h	85	0	76	16	0	0	648	0	589	30	646	669
Grp Sat Flow(s),veh/h/ln	1753	0	1535	1584	0	0	1838	0	1668	1810	1763	1820
Q Serve(g_s), s	6.7	0.0	6.3	0.0	0.0	0.0	0.0	0.0	22.2	0.6	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	6.3	1.3	0.0	0.0	22.2	0.0	22.2	0.6	0.0	0.0
Prop In Lane	1.00		1.00	0.25		0.75	0.00		0.02	1.00		0.11
Lane Grp Cap(c), veh/h	106	0	212	87	0	0	1329	0	1183	348	1368	1413
V/C Ratio(X)	0.80	0.00	0.36	0.18	0.00	0.00	0.49	0.00	0.50	0.09	0.47	0.47
Avail Cap(c_a), veh/h	175	0	318	132	0	0	1329	0	1183	484	1368	1413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.68	0.68	0.68
Uniform Delay (d), s/veh	65.0	0.0	54.7	65.9	0.0	0.0	9.2	0.0	9.2	6.8	0.0	0.0
Incr Delay (d2), s/veh	13.1	0.0	1.0	1.0	0.0	0.0	1.3	0.0	1.5	0.1	0.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	2.5	0.6	0.0	0.0	8.7	0.0	8.0	0.2	0.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.0	0.0	55.8	66.9	0.0	0.0	10.4	0.0	10.7	6.8	0.8	0.8
LnGrp LOS	E		E	E			B		B	A	A	A
Approach Vol, veh/h		161			16			1237			1345	
Approach Delay, s/veh		67.5			66.9			10.5			0.9	
Approach LOS		E			E			B			A	

Timer - Assigned Phs	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	114.7	25.3	9.4	105.2	14.5	10.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	99.0	29.0	14.0	79.0	14.0	9.0
Max Q Clear Time (g_c+I1), s	2.0	8.3	2.6	24.2	8.7	3.3
Green Ext Time (p_c), s	12.9	0.4	0.0	11.1	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	9.5
HCM 7th LOS	A

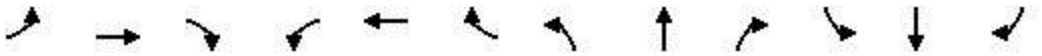
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	14	3	119	24	189	13	348	131	214	355	28
Future Volume (veh/h)	13	14	3	119	24	189	13	348	131	214	355	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1411	1856	1841	1796	1411	1796	1767	1811	1811	1841
Adj Flow Rate, veh/h	19	20	4	135	27	215	14	362	136	238	394	31
Peak Hour Factor	0.70	0.70	0.70	0.88	0.88	0.88	0.96	0.96	0.96	0.90	0.90	0.90
Percent Heavy Veh, %	8	8	33	3	4	7	33	7	9	6	6	4
Cap, veh/h	24	26	5	230	46	237	394	664	249	493	1097	86
Arrive On Green	0.03	0.03	0.03	0.16	0.16	0.16	0.53	0.53	0.53	0.03	0.22	0.22
Sat Flow, veh/h	758	798	160	1473	295	1522	726	1245	468	1725	1657	130
Grp Volume(v), veh/h	43	0	0	162	0	215	14	0	498	238	0	425
Grp Sat Flow(s),veh/h/ln	1715	0	0	1767	0	1522	726	0	1712	1725	0	1788
Q Serve(g_s), s	3.0	0.0	0.0	10.2	0.0	16.7	1.3	0.0	23.0	7.1	0.0	24.2
Cycle Q Clear(g_c), s	3.0	0.0	0.0	10.2	0.0	16.7	10.1	0.0	23.0	7.1	0.0	24.2
Prop In Lane	0.44		0.09	0.83		1.00	1.00		0.27	1.00		0.07
Lane Grp Cap(c), veh/h	55	0	0	276	0	237	394	0	913	493	0	1183
V/C Ratio(X)	0.78	0.00	0.00	0.59	0.00	0.91	0.04	0.00	0.55	0.48	0.00	0.36
Avail Cap(c_a), veh/h	200	0	0	280	0	241	394	0	913	559	0	1183
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	0.00	0.79	0.00	0.79	1.00	0.00	1.00	0.92	0.00	0.92
Uniform Delay (d), s/veh	57.7	0.0	0.0	47.1	0.0	49.8	17.8	0.0	18.4	14.3	0.0	25.3
Incr Delay (d2), s/veh	20.7	0.0	0.0	2.5	0.0	28.5	0.2	0.0	2.3	0.7	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	4.6	0.0	8.1	0.2	0.0	9.3	3.0	0.0	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	78.4	0.0	0.0	49.5	0.0	78.3	18.0	0.0	20.8	15.0	0.0	26.1
LnGrp LOS	E			D		E	B		C	B		C
Approach Vol, veh/h		43			377			512			663	
Approach Delay, s/veh		78.4			65.9			20.7			22.1	
Approach LOS		E			E			C			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		85.4		9.9	15.4	70.0		24.7				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s		69.0		14.0	14.0	49.0		19.0				
Max Q Clear Time (g_c+I1), s		26.2		5.0	9.1	25.0		18.7				
Green Ext Time (p_c), s		2.9		0.1	0.3	3.4		0.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	33.5
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	321	53	165	311	5	57	994	77	4	892	53
Future Volume (vph)	70	321	53	165	311	5	57	994	77	4	892	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1671	1818		1719	1824		1703	3410		1805	3477	
Flt Permitted	0.34	1.00		0.16	1.00		0.15	1.00		0.07	1.00	
Satd. Flow (perm)	590	1818		282	1824		264	3410		129	3477	
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.90	0.90	0.90	0.93	0.93	0.93
Adj. Flow (vph)	81	373	62	181	342	5	63	1104	86	4	959	57
RTOR Reduction (vph)	0	4	0	0	0	0	0	4	0	0	3	0
Lane Group Flow (vph)	81	431	0	181	347	0	63	1186	0	4	1013	0
Heavy Vehicles (%)	8%	2%	4%	5%	4%	0%	6%	4%	14%	0%	3%	2%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		Perm	NA	
Protected Phases	3	8		7	4		1	6			2	
Permitted Phases	4			8			2			2		
Actuated Green, G (s)	53.0	38.1		53.0	43.4		63.0	52.0		59.0	59.0	
Effective Green, g (s)	53.0	38.1		53.0	43.4		63.0	52.0		59.0	59.0	
Actuated g/C Ratio	0.38	0.27		0.38	0.31		0.45	0.37		0.42	0.42	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	297	494		259	565		159	1266		54	1465	
v/s Ratio Prot	0.02	c0.24		c0.07	c0.19		c0.01	c0.35			c0.29	
v/s Ratio Perm	0.08			0.19			0.17			0.03		
v/c Ratio	0.27	0.87		0.70	0.61		0.40	0.94		0.07	0.69	
Uniform Delay, d1	29.5	48.6		33.3	41.2		25.2	42.4		24.2	33.1	
Progression Factor	1.00	1.00		2.06	0.22		1.39	0.93		0.25	0.35	
Incremental Delay, d2	0.5	15.5		2.7	0.7		1.4	12.8		0.2	0.2	
Delay (s)	30.0	64.1		71.3	9.8		36.6	52.1		6.3	11.7	
Level of Service	C	E		E	A		D	D		A	B	
Approach Delay (s/veh)		58.7			30.9			51.3			11.7	
Approach LOS		E			C			D			B	

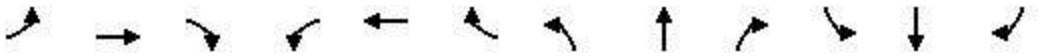
Intersection Summary			
HCM 2000 Control Delay (s/veh)	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	324	75	12	449	33	30	42	22	86	143	0
Future Volume (vph)	5	324	75	12	449	33	30	42	22	86	143	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frt		0.97		1.00	0.99			1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00			0.98	1.00	0.95	1.00	
Satd. Flow (prot)		1780		1656	1789			1862	1468	1770	1845	
Flt Permitted		0.74		0.21	1.00			0.84	1.00	0.70	1.00	
Satd. Flow (perm)		1326		368	1789			1600	1468	1313	1845	
Peak-hour factor, PHF	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90	0.84	0.84	0.84
Adj. Flow (vph)	5	348	81	14	516	38	33	47	24	102	170	0
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	15	0	0	0
Lane Group Flow (vph)	0	428	0	14	553	0	0	80	9	102	170	0
Heavy Vehicles (%)	0%	5%	0%	9%	5%	7%	0%	0%	10%	2%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	6		
Actuated Green, G (s)		38.1		43.4	43.4			52.0	52.0	63.0	59.0	
Effective Green, g (s)		38.1		43.4	43.4			52.0	52.0	63.0	59.0	
Actuated g/C Ratio		0.27		0.31	0.31			0.37	0.37	0.45	0.42	
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		360		114	554			594	545	626	777	
v/s Ratio Prot					c0.31					c0.01	c0.09	
v/s Ratio Perm		c0.32		0.04				0.05	0.01	0.06		
v/c Ratio		1.19		0.12	1.00			0.13	0.02	0.16	0.22	
Uniform Delay, d1		50.9		34.6	48.2			29.1	27.8	22.5	25.8	
Progression Factor		0.35		1.00	1.00			1.00	1.00	0.30	0.28	
Incremental Delay, d2		97.7		0.5	37.3			0.5	0.1	0.0	0.1	
Delay (s)		115.8		35.1	85.6			29.6	27.9	6.7	7.3	
Level of Service		F		D	F			C	C	A	A	
Approach Delay (s/veh)		115.8			84.3			29.2			7.1	
Approach LOS		F			F			C			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	74.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	78	1069	0	229	950
Future Volume (vph)	0	78	1069	0	229	950
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.95		0.91	0.91
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2760	3471		1595	3353
Flt Permitted		1.00	1.00		0.95	0.75
Satd. Flow (perm)		2760	3471		1595	2513
Peak-hour factor, PHF	0.69	0.69	0.92	0.92	0.94	0.94
Adj. Flow (vph)	0	113	1162	0	244	1011
RTOR Reduction (vph)	0	104	0	0	0	0
Lane Group Flow (vph)	0	9	1162	0	220	1035
Heavy Vehicles (%)	0%	3%	4%	0%	3%	3%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		11.0	52.0		11.0	69.0
Effective Green, g (s)		11.0	52.0		11.0	69.0
Actuated g/C Ratio		0.08	0.37		0.08	0.49
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		216	1289		125	1304
v/s Ratio Prot		0.00	c0.33		c0.14	0.06
v/s Ratio Perm						0.33
v/c Ratio		0.04	0.90		1.76	0.79
Uniform Delay, d1		59.6	41.6		64.5	29.6
Progression Factor		1.00	0.34		1.00	1.00
Incremental Delay, d2		0.1	5.1		372.6	3.4
Delay (s)		59.7	19.4		437.1	33.0
Level of Service		E	B		F	C
Approach Delay (s/veh)	59.7		19.4			103.8
Approach LOS	E		B			F

Intersection Summary			
HCM 2000 Control Delay (s/veh)	63.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	333	1	308	2	1	3	209	269	2	0	279	225
Future Volume (veh/h)	333	1	308	2	1	3	209	269	2	0	279	225
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1900	1870	1159	1900	1900	1811	1841	1900	1900	1811	1826
Adj Flow Rate, veh/h	340	1	314	3	1	4	252	324	2	0	310	250
Peak Hour Factor	0.98	0.98	0.98	0.75	0.75	0.75	0.83	0.83	0.83	0.90	0.90	0.90
Percent Heavy Veh, %	4	0	2	50	0	0	6	4	0	0	6	5
Cap, veh/h	436	2	553	137	56	152	530	1016	6	0	718	613
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.22	1.00	1.00	0.00	0.79	0.79
Sat Flow, veh/h	1389	5	1606	278	163	442	1725	1827	11	0	1811	1547
Grp Volume(v), veh/h	340	0	315	8	0	0	252	0	326	0	310	250
Grp Sat Flow(s),veh/h/ln	1389	0	1611	883	0	0	1725	0	1839	0	1811	1547
Q Serve(g_s), s	18.0	0.0	19.1	0.1	0.0	0.0	10.7	0.0	0.0	0.0	6.5	5.9
Cycle Q Clear(g_c), s	37.2	0.0	19.1	19.2	0.0	0.0	10.7	0.0	0.0	0.0	6.5	5.9
Prop In Lane	1.00		1.00	0.37		0.50	1.00		0.01	0.00		1.00
Lane Grp Cap(c), veh/h	436	0	555	345	0	0	530	0	1022	0	718	613
V/C Ratio(X)	0.78	0.00	0.57	0.02	0.00	0.00	0.48	0.00	0.32	0.00	0.43	0.41
Avail Cap(c_a), veh/h	513	0	644	422	0	0	615	0	1022	0	718	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.80	0.00	0.80	0.00	0.85	0.85
Uniform Delay (d), s/veh	40.7	0.0	32.1	27.0	0.0	0.0	15.4	0.0	0.0	0.0	8.2	8.1
Incr Delay (d2), s/veh	6.5	0.0	0.9	0.0	0.0	0.0	0.5	0.0	0.7	0.0	1.6	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	0.0	7.5	0.2	0.0	0.0	3.5	0.0	0.2	0.0	2.2	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.2	0.0	33.0	27.0	0.0	0.0	15.9	0.0	0.7	0.0	9.8	9.8
LnGrp LOS	D		C	C			B		A		A	A
Approach Vol, veh/h		655			8			578			560	
Approach Delay, s/veh		40.3			27.0			7.3			9.8	
Approach LOS		D			C			A			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	19.1	53.6		47.3		72.7		47.3				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	19.0	35.0		48.0		60.0		48.0				
Max Q Clear Time (g_c+I1), s	12.7	8.5		21.2		2.0		39.2				
Green Ext Time (p_c), s	0.4	2.7		0.0		2.1		2.1				

Intersection Summary												
HCM 7th Control Delay, s/veh			20.2									
HCM 7th LOS			C									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	171	79	318	294	239	326
Future Volume (veh/h)	171	79	318	294	239	326
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1811	1796	1826	1856	1826	1841
Adj Flow Rate, veh/h	184	85	342	316	275	375
Peak Hour Factor	0.93	0.93	0.93	0.93	0.87	0.87
Percent Heavy Veh, %	6	7	5	3	5	4
Cap, veh/h	203	94	514	475	649	1327
Arrive On Green	0.18	0.18	1.00	1.00	0.08	0.72
Sat Flow, veh/h	1132	523	874	807	1739	1841
Grp Volume(v), veh/h	270	0	0	658	275	375
Grp Sat Flow(s),veh/h/ln	1660	0	0	1681	1739	1841
Q Serve(g_s), s	19.1	0.0	0.0	0.0	7.4	8.6
Cycle Q Clear(g_c), s	19.1	0.0	0.0	0.0	7.4	8.6
Prop In Lane	0.68	0.31		0.48	1.00	
Lane Grp Cap(c), veh/h	297	0	0	988	649	1327
V/C Ratio(X)	0.91	0.00	0.00	0.67	0.42	0.28
Avail Cap(c_a), veh/h	360	0	0	988	766	1327
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.80	1.00	1.00
Uniform Delay (d), s/veh	48.3	0.0	0.0	0.0	7.7	5.9
Incr Delay (d2), s/veh	23.3	0.0	0.0	2.8	0.4	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	0.0	0.8	2.6	3.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	71.6	0.0	0.0	2.8	8.2	6.4
LnGrp LOS	E			A	A	A
Approach Vol, veh/h	270		658			650
Approach Delay, s/veh	71.6		2.8			7.1
Approach LOS	E		A			A

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		92.5		27.5	15.9	76.6
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		82.0		26.0	18.0	58.0
Max Q Clear Time (g_c+I1), s		10.6		21.1	9.4	2.0
Green Ext Time (p_c), s		2.5		0.4	0.5	5.6

Intersection Summary	
HCM 7th Control Delay, s/veh	16.4
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	4.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	14	36	16	9	39	17
Future Vol, veh/h	14	36	16	9	39	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	23	0	0	22	0	0
Mvmt Flow	15	39	17	10	42	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	54	0	79	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	45	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1564	-	928	1044
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	983	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1564	-	918	1044
Mov Cap-2 Maneuver	-	-	-	-	918	-
Stage 1	-	-	-	-	993	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4.69	9.04
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	953	-	-	1152	-
HCM Lane V/C Ratio	0.064	-	-	0.011	-
HCM Ctrl Dly (s/v)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	246	192	57	62	27
Future Vol, veh/h	24	246	192	57	62	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	6	8	0	0	0
Mvmt Flow	26	267	209	62	67	29

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	271	0	-	0	559	240
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	320	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1304	-	-	-	493	804
Stage 1	-	-	-	-	805	-
Stage 2	-	-	-	-	741	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1304	-	-	-	482	804
Mov Cap-2 Maneuver	-	-	-	-	482	-
Stage 1	-	-	-	-	786	-
Stage 2	-	-	-	-	741	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.69	0	12.96
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	160	-	-	-	549
HCM Lane V/C Ratio	0.02	-	-	-	0.176
HCM Ctrl Dly (s/v)	7.8	0	-	-	13
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

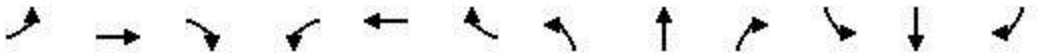
Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	25	23	51	16	8
Future Vol, veh/h	9	25	23	51	16	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	8	13	0
Mvmt Flow	10	27	25	55	17	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	127	22	26	0	-	0
Stage 1	22	-	-	-	-	-
Stage 2	105	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	872	1061	1601	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	924	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	858	1061	1601	-	-	-
Mov Cap-2 Maneuver	858	-	-	-	-	-
Stage 1	990	-	-	-	-	-
Stage 2	924	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.74	2.26	0
HCM LOS	A		

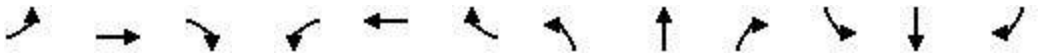
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	559	-	999	-	-
HCM Lane V/C Ratio	0.016	-	0.037	-	-
HCM Ctrl Dly (s/v)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	61	7	15	63	24	3	302	13	25	648	63
Future Volume (veh/h)	113	61	7	15	63	24	3	302	13	25	648	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1900	1796	1900	1900	1900	1885	1900	1900	1885	1870
Adj Flow Rate, veh/h	128	69	8	17	72	28	3	347	15	26	668	65
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.87	0.87	0.87	0.97	0.97	0.97
Percent Heavy Veh, %	1	0	0	7	0	0	0	1	0	0	1	2
Cap, veh/h	185	80	9	54	203	72	600	1338	58	761	1262	123
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.75	0.75	0.75	1.00	1.00	1.00
Sat Flow, veh/h	853	477	54	148	1210	427	735	1794	78	1036	1691	165
Grp Volume(v), veh/h	205	0	0	117	0	0	3	0	362	26	0	733
Grp Sat Flow(s),veh/h/ln	1384	0	0	1785	0	0	735	0	1871	1036	0	1856
Q Serve(g_s), s	12.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	8.5	0.3	0.0	0.0
Cycle Q Clear(g_c), s	20.5	0.0	0.0	8.0	0.0	0.0	0.1	0.0	8.5	8.8	0.0	0.0
Prop In Lane	0.62		0.04	0.15		0.24	1.00		0.04	1.00		0.09
Lane Grp Cap(c), veh/h	275	0	0	330	0	0	600	0	1396	761	0	1384
V/C Ratio(X)	0.75	0.00	0.00	0.35	0.00	0.00	0.01	0.00	0.26	0.03	0.00	0.53
Avail Cap(c_a), veh/h	448	0	0	532	0	0	600	0	1396	761	0	1384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.84	0.00	0.84
Uniform Delay (d), s/veh	57.4	0.0	0.0	51.8	0.0	0.0	4.5	0.0	5.6	0.4	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.5	0.1	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	0.0	3.7	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.5	0.0	0.0	52.4	0.0	0.0	4.5	0.0	6.0	0.4	0.0	1.2
LnGrp LOS	E			D			A		A	A		A
Approach Vol, veh/h		205			117			365			759	
Approach Delay, s/veh		61.5			52.4			6.0			1.2	
Approach LOS		E			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		110.5		29.5		110.5		29.5				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		88.0		40.0		88.0		40.0				
Max Q Clear Time (g_c+I1), s		10.8		10.0		10.5		22.5				
Green Ext Time (p_c), s		6.3		0.6		2.4		1.1				

Intersection Summary	
HCM 7th Control Delay, s/veh	15.1
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	65	24	82	135	151	16	357	56	80	606	40
Future Volume (veh/h)	47	65	24	82	135	151	16	357	56	80	606	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1900	1856	1856	1856	1900	1870	1900	1900	1885	1900
Adj Flow Rate, veh/h	61	84	31	86	142	159	18	392	62	88	666	44
Peak Hour Factor	0.77	0.77	0.77	0.95	0.95	0.95	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	3	0	3	3	3	0	2	0	0	1	0
Cap, veh/h	88	114	36	239	212	238	538	1022	162	669	1134	75
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	202	428	135	1267	799	895	751	1576	249	952	1749	116
Grp Volume(v), veh/h	176	0	0	86	0	301	18	0	454	88	0	710
Grp Sat Flow(s),veh/h/ln	764	0	0	1267	0	1694	751	0	1825	952	0	1864
Q Serve(g_s), s	12.0	0.0	0.0	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	34.2	0.0	0.0	15.5	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.35		0.18	1.00		0.53	1.00		0.14	1.00		0.06
Lane Grp Cap(c), veh/h	238	0	0	239	0	450	538	0	1184	669	0	1209
V/C Ratio(X)	0.74	0.00	0.00	0.36	0.00	0.67	0.03	0.00	0.38	0.13	0.00	0.59
Avail Cap(c_a), veh/h	462	0	0	436	0	714	538	0	1184	669	0	1209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.9	0.0	0.0	43.4	0.0	45.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.5	0.0	0.0	0.9	0.0	1.7	0.0	0.0	0.2	0.4	0.0	2.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	0.0	2.6	0.0	9.5	0.0	0.0	0.1	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.4	0.0	0.0	44.4	0.0	47.6	0.0	0.0	0.2	0.4	0.0	2.1
LnGrp LOS	E			D		D	A		A	A		A
Approach Vol, veh/h		176			387			472			798	
Approach Delay, s/veh		58.4			46.9			0.2			1.9	
Approach LOS		E			D			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		96.8		43.2		96.8		43.2				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		69.0		59.0		69.0		59.0				
Max Q Clear Time (g_c+I1), s		2.0		36.2		2.0		24.2				
Green Ext Time (p_c), s		6.5		1.0		3.3		2.3				

Intersection Summary	
HCM 7th Control Delay, s/veh	16.4
HCM 7th LOS	B

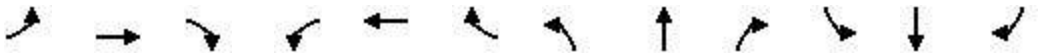
Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	219	6	29	429	66	7	4	45	43	7	8
Future Vol, veh/h	17	219	6	29	429	66	7	4	45	43	7	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	90	90	90	71	71	71	66	66	66
Heavy Vehicles, %	0	2	0	0	2	8	0	0	0	17	0	13
Mvmt Flow	20	264	7	32	477	73	10	6	63	65	11	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	550	0	0	271	0	0	855	923	136	753	890	513
Stage 1	-	-	-	-	-	-	308	308	-	578	578	-
Stage 2	-	-	-	-	-	-	546	614	-	176	312	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.9	7.555	6.5	6.395
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.355	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.755	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.6615	4	3.4235
Pot Cap-1 Maneuver	1030	-	-	1304	-	-	268	272	895	290	284	534
Stage 1	-	-	-	-	-	-	682	664	-	469	504	-
Stage 2	-	-	-	-	-	-	525	486	-	772	661	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1030	-	-	1304	-	-	237	256	895	249	268	534
Mov Cap-2 Maneuver	-	-	-	-	-	-	237	256	-	249	268	-
Stage 1	-	-	-	-	-	-	667	649	-	452	486	-
Stage 2	-	-	-	-	-	-	484	468	-	696	647	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.75	0.43	12.08	24.54
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	587	244	-	-	97	-	-	271
HCM Lane V/C Ratio	0.134	0.02	-	-	0.025	-	-	0.324
HCM Ctrl Dly (s/v)	12.1	8.6	0.2	-	7.8	0	-	24.5
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	1.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	162	37	210	253	23	188	1364	275	81	1310	97
Future Volume (veh/h)	124	162	37	210	253	23	188	1364	275	81	1310	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1900	1870	1856	1900	1900	1885	1885	1870	1870	1900
Adj Flow Rate, veh/h	155	202	46	244	294	27	192	1392	0	87	1409	104
Peak Hour Factor	0.80	0.80	0.80	0.86	0.86	0.86	0.98	0.98	0.98	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	0	2	3	0	0	1	1	2	2	0
Cap, veh/h	210	233	53	240	317	275	219	2902		260	1814	133
Arrive On Green	0.08	0.16	0.16	0.09	0.17	0.17	0.06	0.56	0.00	0.03	0.54	0.54
Sat Flow, veh/h	1810	1463	333	1781	1856	1610	1810	5147	1598	1781	3356	247
Grp Volume(v), veh/h	155	0	248	244	294	27	192	1392	0	87	743	770
Grp Sat Flow(s),veh/h/ln	1810	0	1796	1781	1856	1610	1810	1716	1598	1781	1777	1826
Q Serve(g_s), s	11.2	0.0	21.5	15.0	25.0	2.3	7.7	25.9	0.0	3.3	52.9	53.6
Cycle Q Clear(g_c), s	11.2	0.0	21.5	15.0	25.0	2.3	7.7	25.9	0.0	3.3	52.9	53.6
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	210	0	287	240	317	275	219	2902		260	960	987
V/C Ratio(X)	0.74	0.00	0.87	1.02	0.93	0.10	0.88	0.48		0.34	0.77	0.78
Avail Cap(c_a), veh/h	219	0	314	240	336	292	219	2902		301	960	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.90	0.90	0.90	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	0.0	65.6	56.8	65.4	55.9	31.7	20.9	0.0	16.4	29.1	29.2
Incr Delay (d2), s/veh	11.8	0.0	20.3	59.2	28.2	0.1	30.5	0.1	0.0	0.8	6.1	6.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	11.5	6.5	14.3	0.9	5.9	10.4	0.0	1.4	23.8	24.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.8	0.0	85.8	116.0	93.6	56.1	62.2	21.0	0.0	17.1	35.1	35.3
LnGrp LOS	E		F	F	F	E	E	C		B	D	D
Approach Vol, veh/h		403			565			1584			1600	
Approach Delay, s/veh		77.0			101.5			26.0			34.2	
Approach LOS		E			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	92.5	21.0	31.5	11.3	96.2	19.2	33.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	84.0	15.0	28.0	9.0	84.0	14.0	29.0
Max Q Clear Time (g_c+I1), s	9.7	55.6	17.0	23.5	5.3	27.9	13.2	27.0
Green Ext Time (p_c), s	0.0	13.1	0.0	0.5	0.1	14.5	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	44.4
HCM 7th LOS	D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	360	69	57	351	144	36	176	51	92	185	43
Future Volume (vph)	68	360	69	57	351	144	36	176	51	92	185	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0		6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00		1.00	
Frt		0.98			0.96			1.00	0.85		0.98	
Flt Protected		0.99			0.99			0.99	1.00		0.99	
Satd. Flow (prot)		3451			3369			1884	1583		1839	
Flt Permitted		0.75			0.82			0.88	1.00		0.72	
Satd. Flow (perm)		2610			2771			1673	1583		1345	
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.81	0.81	0.81
Adj. Flow (vph)	76	404	78	67	413	169	40	198	57	114	228	53
RTOR Reduction (vph)	0	9	0	0	24	0	0	0	36	0	6	0
Lane Group Flow (vph)	0	549	0	0	625	0	0	238	21	0	389	0
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%	0%	0%	2%	0%	0%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	pm+pt	NA	
Protected Phases		2			6			4		3	8	
Permitted Phases	2			6			4		4	8		
Actuated Green, G (s)		63.3			63.3			44.7	44.7		44.7	
Effective Green, g (s)		63.3			63.3			44.7	44.7		44.7	
Actuated g/C Ratio		0.53			0.53			0.37	0.37		0.37	
Clearance Time (s)		6.0			6.0			6.0	6.0		6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)		1376			1461			623	589		501	
v/s Ratio Prot												
v/s Ratio Perm		0.21			c0.23			0.14	0.01		c0.29	
v/c Ratio		0.40			0.43			0.38	0.04		0.78	
Uniform Delay, d1		17.0			17.3			27.5	23.9		33.3	
Progression Factor		1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2		0.9			0.9			0.4	0.0		7.4	
Delay (s)		17.8			18.2			27.9	24.0		40.7	
Level of Service		B			B			C	C		D	
Approach Delay (s/veh)		17.8			18.2			27.2			40.7	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	38	515	41	38	680
Future Vol, veh/h	39	38	515	41	38	680
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	89	89	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	67	66	579	46	42	747

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1432	602	0	0	625	0
Stage 1	602	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	149	504	-	-	966	-
Stage 1	551	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	143	504	-	-	966	-
Mov Cap-2 Maneuver	279	-	-	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	413	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	20.9	0	0.47
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	357	966	-
HCM Lane V/C Ratio	-	-	0.371	0.043	-
HCM Ctrl Dly (s/v)	-	-	20.9	8.9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.7	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	2	8	62	25	32
Future Vol, veh/h	36	2	8	62	25	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	20	0	0	4	9	0
Mvmt Flow	39	2	9	67	27	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	76	0	-	0	123	42
Stage 1	-	-	-	-	42	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	4.3	-	-	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.38	-	-	-	3.581	3.3
Pot Cap-1 Maneuver	1416	-	-	-	856	1034
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	925	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1416	-	-	-	832	1034
Mov Cap-2 Maneuver	-	-	-	-	832	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	925	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	7.21	0	9.13
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1415	-	-	-	935
HCM Lane V/C Ratio	0.028	-	-	-	0.066
HCM Ctrl Dly (s/v)	7.6	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	5.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	25	2	11	51	1
Future Vol, veh/h	2	25	2	11	51	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	9	0	0	5	0
Mvmt Flow	2	27	2	12	55	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	32	16
Stage 1	-	-	-	-	16	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	-	-	4.1	-	6.45	6.2
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.3
Pot Cap-1 Maneuver	-	-	1597	-	974	1069
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1597	-	973	1069
Mov Cap-2 Maneuver	-	-	-	-	973	-
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.12	8.92
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	974	-	-	277	-
HCM Lane V/C Ratio	0.058	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	49	508	84	73	674
Future Vol, veh/h	51	49	508	84	73	674
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	94	94	96	96
Heavy Vehicles, %	0	0	2	0	2	1
Mvmt Flow	56	54	540	89	76	702

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1439	585	0	0	630	0
Stage 1	585	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	148	515	-	-	952	-
Stage 1	561	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	136	515	-	-	952	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	561	-	-	-	-	-
Stage 2	387	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	19.9	0	0.89
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	350	952	-
HCM Lane V/C Ratio	-	-	0.314	0.08	-
HCM Ctrl Dly (s/v)	-	-	19.9	9.1	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.3	0.3	-

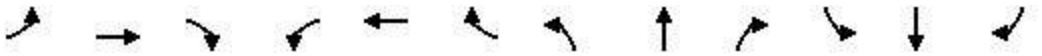
Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	147	21	35	45	21	76
Future Vol, veh/h	147	21	35	45	21	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	81	81	76	76
Heavy Vehicles, %	1	0	11	0	0	2
Mvmt Flow	175	25	43	56	28	100

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	200	0	329	188
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	142	-
Critical Hdwy	-	-	4.21	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.299	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1320	-	669	855
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1320	-	647	855
Mov Cap-2 Maneuver	-	-	-	-	647	-
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.42	10.36
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	799	-	-	788	-
HCM Lane V/C Ratio	0.16	-	-	0.033	-
HCM Ctrl Dly (s/v)	10.4	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	5	89	4	1	34	4	1523	25	29	1424	87
Future Volume (veh/h)	109	5	89	4	1	34	4	1523	25	29	1424	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1856	1900	1900	1900	1530	1885	1900	1900	1870	1870
Adj Flow Rate, veh/h	140	6	114	6	2	55	5	1731	28	33	1637	100
Peak Hour Factor	0.78	0.78	0.78	0.62	0.62	0.62	0.88	0.88	0.88	0.87	0.87	0.87
Percent Heavy Veh, %	2	0	3	0	0	0	25	1	0	0	2	2
Cap, veh/h	156	14	271	29	6	72	25	2416	39	195	2549	155
Arrive On Green	0.09	0.18	0.18	0.05	0.05	0.05	0.69	0.69	0.69	0.05	1.00	1.00
Sat Flow, veh/h	1781	81	1541	84	120	1404	3	3515	57	1810	3403	207
Grp Volume(v), veh/h	140	0	120	63	0	0	923	0	841	33	850	887
Grp Sat Flow(s),veh/h/ln	1781	0	1623	1608	0	0	1869	0	1705	1810	1777	1833
Q Serve(g_s), s	12.5	0.0	10.5	2.5	0.0	0.0	0.0	0.0	48.6	0.9	0.0	0.0
Cycle Q Clear(g_c), s	12.5	0.0	10.5	6.2	0.0	0.0	48.0	0.0	48.6	0.9	0.0	0.0
Prop In Lane	1.00		0.95	0.10		0.87	0.01		0.03	1.00		0.11
Lane Grp Cap(c), veh/h	156	0	286	107	0	0	1308	0	1172	195	1331	1373
V/C Ratio(X)	0.90	0.00	0.42	0.59	0.00	0.00	0.71	0.00	0.72	0.17	0.64	0.65
Avail Cap(c_a), veh/h	156	0	294	115	0	0	1308	0	1172	332	1331	1373
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.47	0.47	0.47
Uniform Delay (d), s/veh	72.3	0.0	58.6	74.9	0.0	0.0	15.3	0.0	15.4	14.8	0.0	0.0
Incr Delay (d2), s/veh	43.8	0.0	1.0	6.8	0.0	0.0	3.2	0.0	3.8	0.2	1.1	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	4.5	2.8	0.0	0.0	20.7	0.0	19.1	0.4	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	116.1	0.0	59.6	81.8	0.0	0.0	18.5	0.0	19.2	15.0	1.1	1.1
LnGrp LOS	F		E	F			B		B	B	A	A
Approach Vol, veh/h		260			63			1764			1770	
Approach Delay, s/veh		90.0			81.8			18.9			1.4	
Approach LOS		F			F			B			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		125.8		34.2	9.8	116.0	20.0	14.2				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		119.0		29.0	16.0	97.0	14.0	9.0				
Max Q Clear Time (g_c+I1), s		2.0		12.5	2.9	50.6	14.5	8.2				
Green Ext Time (p_c), s		24.8		0.6	0.0	21.1	0.0	0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			16.7									
HCM 7th LOS			B									

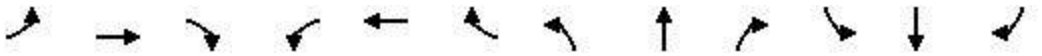
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	17	8	246	25	261	37	473	116	206	650	39
Future Volume (veh/h)	33	17	8	246	25	261	37	473	116	206	650	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1900	1900	1885	1841	1885	1900	1870	1900	1870	1885	1781
Adj Flow Rate, veh/h	38	20	9	270	27	287	39	498	122	210	663	40
Peak Hour Factor	0.86	0.86	0.86	0.91	0.91	0.91	0.95	0.95	0.95	0.98	0.98	0.98
Percent Heavy Veh, %	3	0	0	1	4	1	0	2	0	2	1	8
Cap, veh/h	49	26	12	313	31	312	432	744	182	388	1105	67
Arrive On Green	0.05	0.05	0.05	0.20	0.20	0.20	0.51	0.51	0.51	0.10	0.84	0.84
Sat Flow, veh/h	1024	539	242	1601	160	1598	756	1451	355	1781	1760	106
Grp Volume(v), veh/h	67	0	0	297	0	287	39	0	620	210	0	703
Grp Sat Flow(s),veh/h/ln	1805	0	0	1761	0	1598	756	0	1806	1781	0	1866
Q Serve(g_s), s	5.1	0.0	0.0	22.9	0.0	24.7	3.8	0.0	35.6	7.9	0.0	17.4
Cycle Q Clear(g_c), s	5.1	0.0	0.0	22.9	0.0	24.7	5.1	0.0	35.6	7.9	0.0	17.4
Prop In Lane	0.57		0.13	0.91		1.00	1.00		0.20	1.00		0.06
Lane Grp Cap(c), veh/h	87	0	0	344	0	312	432	0	926	388	0	1172
V/C Ratio(X)	0.77	0.00	0.00	0.86	0.00	0.92	0.09	0.00	0.67	0.54	0.00	0.60
Avail Cap(c_a), veh/h	181	0	0	365	0	331	432	0	926	437	0	1172
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	0.43	0.00	0.43	1.00	0.00	1.00	0.71	0.00	0.71
Uniform Delay (d), s/veh	65.9	0.0	0.0	54.5	0.0	55.2	18.2	0.0	25.3	19.3	0.0	5.7
Incr Delay (d2), s/veh	13.5	0.0	0.0	8.8	0.0	15.6	0.4	0.0	3.8	0.8	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	0.0	10.9	0.0	11.2	0.7	0.0	16.0	3.1	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	79.4	0.0	0.0	63.3	0.0	70.8	18.6	0.0	29.1	20.1	0.0	7.3
LnGrp LOS	E			E		E	B		C	C		A
Approach Vol, veh/h		67			584			659			913	
Approach Delay, s/veh		79.4			67.0			28.5			10.3	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	2	4	5	6	8
Phs Duration (G+Y+Rc), s	93.9	12.7	16.1	77.8	33.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	79.0	14.0	14.0	59.0	29.0
Max Q Clear Time (g_c+I1), s	19.4	7.1	9.9	37.6	26.7
Green Ext Time (p_c), s	5.7	0.1	0.2	4.5	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	32.7
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	229	57	230	407	26	78	1260	103	9	989	102
Future Volume (vph)	69	229	57	230	407	26	78	1260	103	9	989	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1800		1770	1848		1787	3502		1805	3487	
Flt Permitted	0.14	1.00		0.23	1.00		0.08	1.00		0.05	1.00	
Satd. Flow (perm)	251	1800		437	1848		141	3502		104	3487	
Peak-hour factor, PHF	0.81	0.81	0.81	0.91	0.91	0.91	0.95	0.95	0.95	0.84	0.84	0.84
Adj. Flow (vph)	85	283	70	253	447	29	82	1326	108	11	1177	121
RTOR Reduction (vph)	0	5	0	0	1	0	0	4	0	0	5	0
Lane Group Flow (vph)	85	348	0	253	475	0	82	1430	0	11	1293	0
Heavy Vehicles (%)	3%	2%	4%	2%	2%	0%	1%	2%	1%	0%	2%	3%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		Perm	NA	
Protected Phases	3	8		7	4		1	6			2	
Permitted Phases	4			8			2			2		
Actuated Green, G (s)	58.0	40.4		58.0	47.6		78.0	62.0		73.0	73.0	
Effective Green, g (s)	58.0	40.4		58.0	47.6		78.0	62.0		73.0	73.0	
Actuated g/C Ratio	0.36	0.25		0.36	0.30		0.49	0.39		0.46	0.46	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	188	454		305	549		120	1357		47	1590	
v/s Ratio Prot	0.03	0.19		c0.09	c0.26		c0.02	c0.41			c0.37	
v/s Ratio Perm	0.13			0.21			0.31			0.11		
v/c Ratio	0.45	0.77		0.83	0.86		0.68	1.05		0.23	0.81	
Uniform Delay, d1	38.3	55.4		40.2	53.1		30.8	49.0		26.5	37.6	
Progression Factor	1.00	1.00		1.76	0.26		1.52	0.97		0.35	0.47	
Incremental Delay, d2	1.7	7.6		1.8	1.4		10.0	35.8		1.0	0.4	
Delay (s)	40.0	63.0		72.7	15.1		56.7	83.5		10.4	18.1	
Level of Service	D	E		E	B		E	F		B	B	
Approach Delay (s/veh)		58.5			35.1			82.1			18.1	
Approach LOS		E			D			F			B	

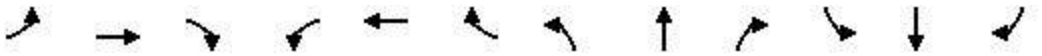
Intersection Summary			
HCM 2000 Control Delay (s/veh)	49.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	275	82	29	661	75	53	183	34	26	143	0
Future Volume (vph)	4	275	82	29	661	75	53	183	34	26	143	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00	1.00	1.00	1.00	
Frt		0.97		1.00	0.98			1.00	0.85	1.00	1.00	
Flt Protected		1.00		0.95	1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		1784		1805	1822			1862	1524	1805	1881	
Flt Permitted		0.57		0.18	1.00			0.88	1.00	0.42	1.00	
Satd. Flow (perm)		1013		341	1822			1654	1524	804	1881	
Peak-hour factor, PHF	0.85	0.85	0.85	0.91	0.91	0.91	0.73	0.73	0.73	0.79	0.79	0.79
Adj. Flow (vph)	5	324	96	32	726	82	73	251	47	33	181	0
RTOR Reduction (vph)	0	7	0	0	2	0	0	0	29	0	0	0
Lane Group Flow (vph)	0	418	0	32	806	0	0	324	18	33	181	0
Heavy Vehicles (%)	0%	3%	4%	0%	3%	0%	4%	0%	6%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	6		
Actuated Green, G (s)		40.4		47.6	47.6			62.0	62.0	78.0	73.0	
Effective Green, g (s)		40.4		47.6	47.6			62.0	62.0	78.0	73.0	
Actuated g/C Ratio		0.25		0.30	0.30			0.39	0.39	0.49	0.46	
Clearance Time (s)		6.0		6.0	6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		255		101	542			640	590	492	858	
v/s Ratio Prot					c0.44					c0.01	c0.10	
v/s Ratio Perm		c0.41		0.09				c0.20	0.01	0.03		
v/c Ratio		1.64		0.32	1.49			0.51	0.03	0.07	0.21	
Uniform Delay, d1		59.8		43.6	56.2			37.3	30.4	22.2	26.2	
Progression Factor		0.49		1.00	1.00			1.00	1.00	0.16	0.21	
Incremental Delay, d2		298.5		1.8	228.8			2.8	0.1	0.0	0.1	
Delay (s)		328.1		45.4	285.0			40.2	30.5	3.6	5.6	
Level of Service		F		D	F			D	C	A	A	
Approach Delay (s/veh)		328.1			275.9			39.0			5.3	
Approach LOS		F			F			D			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	209.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	269	1363	0	181	1104
Future Volume (vph)	0	269	1363	0	181	1104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.95		0.91	0.91
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2814	3539		1626	3388
Flt Permitted		1.00	1.00		0.95	0.69
Satd. Flow (perm)		2814	3539		1626	2324
Peak-hour factor, PHF	0.82	0.82	0.95	0.95	0.89	0.89
Adj. Flow (vph)	0	328	1435	0	203	1240
RTOR Reduction (vph)	0	295	0	0	0	0
Lane Group Flow (vph)	0	33	1435	0	183	1260
Heavy Vehicles (%)	0%	1%	2%	0%	1%	2%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		16.0	62.0		16.0	84.0
Effective Green, g (s)		16.0	62.0		16.0	84.0
Actuated g/C Ratio		0.10	0.39		0.10	0.53
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		281	1371		162	1326
v/s Ratio Prot		0.01	c0.41		c0.11	c0.09
v/s Ratio Perm						0.40
v/c Ratio		0.12	1.05		1.13	0.95
Uniform Delay, d1		65.6	49.0		72.0	36.0
Progression Factor		1.00	0.34		1.00	1.00
Incremental Delay, d2		0.1	23.4		109.8	14.5
Delay (s)		65.7	39.8		181.8	50.5
Level of Service		E	D		F	D
Approach Delay (s/veh)	65.7		39.8			67.1
Approach LOS	E		D			E

Intersection Summary			
HCM 2000 Control Delay (s/veh)	54.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	259	1	242	3	9	8	245	448	9	2	570	245
Future Volume (veh/h)	259	1	242	3	9	8	245	448	9	2	570	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1856	1900	1900	1707	1856	1856	1900	1900	1870	1856
Adj Flow Rate, veh/h	301	1	281	3	10	9	282	515	10	2	633	272
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	1	0	3	0	0	13	3	3	0	0	2	3
Cap, veh/h	342	2	493	65	209	169	466	1101	21	26	867	730
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.20	1.00	1.00	0.93	0.93	0.93
Sat Flow, veh/h	1404	6	1605	115	680	551	1767	1814	35	1	1868	1572
Grp Volume(v), veh/h	301	0	282	22	0	0	282	0	525	635	0	272
Grp Sat Flow(s),veh/h/ln	1404	0	1611	1346	0	0	1767	0	1849	1869	0	1572
Q Serve(g_s), s	22.3	0.0	20.6	0.1	0.0	0.0	12.7	0.0	0.0	0.0	0.0	2.6
Cycle Q Clear(g_c), s	43.0	0.0	20.6	20.7	0.0	0.0	12.7	0.0	0.0	10.6	0.0	2.6
Prop In Lane	1.00		1.00	0.14		0.41	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h	342	0	495	443	0	0	466	0	1123	894	0	730
V/C Ratio(X)	0.88	0.00	0.57	0.05	0.00	0.00	0.61	0.00	0.47	0.71	0.00	0.37
Avail Cap(c_a), veh/h	342	0	495	443	0	0	466	0	1123	894	0	730
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	0.73	0.00	0.73	0.63	0.00	0.63
Uniform Delay (d), s/veh	54.5	0.0	40.7	34.3	0.0	0.0	14.9	0.0	0.0	3.1	0.0	2.8
Incr Delay (d2), s/veh	22.3	0.0	1.6	0.0	0.0	0.0	1.6	0.0	1.0	3.0	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.7	0.0	8.4	0.5	0.0	0.0	4.2	0.0	0.3	2.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	76.7	0.0	42.3	34.3	0.0	0.0	16.5	0.0	1.0	6.1	0.0	3.7
LnGrp LOS	E		D	C			B		A	A		A
Approach Vol, veh/h		583			22			807			907	
Approach Delay, s/veh		60.1			34.3			6.4			5.4	
Approach LOS		E			C			A			A	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	20.0	71.0		49.0		91.0		49.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	14.0	65.0		43.0		85.0		43.0				
Max Q Clear Time (g_c+I1), s	14.7	12.6		22.7		2.0		45.0				
Green Ext Time (p_c), s	0.0	6.0		0.1		3.8		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			19.8									
HCM 7th LOS			B									

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	276	186	477	238	162	526
Future Volume (veh/h)	276	186	477	238	162	526
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	291	196	518	259	200	649
Peak Hour Factor	0.95	0.95	0.92	0.92	0.81	0.81
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	305	206	589	294	522	1146
Arrive On Green	0.30	0.30	1.00	1.00	0.07	0.61
Sat Flow, veh/h	1012	682	1176	588	1781	1870
Grp Volume(v), veh/h	488	0	0	777	200	649
Grp Sat Flow(s),veh/h/ln	1697	0	0	1764	1781	1870
Q Serve(g_s), s	39.5	0.0	0.0	0.0	7.6	28.8
Cycle Q Clear(g_c), s	39.5	0.0	0.0	0.0	7.6	28.8
Prop In Lane	0.60	0.40		0.33	1.00	
Lane Grp Cap(c), veh/h	512	0	0	883	522	1146
V/C Ratio(X)	0.95	0.00	0.00	0.88	0.38	0.57
Avail Cap(c_a), veh/h	558	0	0	883	539	1146
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.78	1.00	1.00
Uniform Delay (d), s/veh	47.9	0.0	0.0	0.0	14.6	16.1
Incr Delay (d2), s/veh	25.9	0.0	0.0	9.8	0.5	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.1	0.0	0.0	2.4	3.1	12.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	73.8	0.0	0.0	9.8	15.1	18.1
LnGrp LOS	E			A	B	B
Approach Vol, veh/h	488		777			849
Approach Delay, s/veh	73.8		9.8			17.4
Approach LOS	E		A			B

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		91.8		48.2	15.7	76.1
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		82.0		46.0	11.0	65.0
Max Q Clear Time (g_c+I1), s		30.8		41.5	9.6	2.0
Green Ext Time (p_c), s		5.0		0.8	0.1	7.1

Intersection Summary	
HCM 7th Control Delay, s/veh	27.6
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	4.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	13	67	26	15	63	25
Future Vol, veh/h	13	67	26	15	63	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	73	28	16	68	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	87	0	123	51
Stage 1	-	-	-	-	51	-
Stage 2	-	-	-	-	73	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1522	-	877	1023
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	955	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1522	-	860	1023
Mov Cap-2 Maneuver	-	-	-	-	860	-
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	937	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4.7	9.47
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	901	-	-	1141	-
HCM Lane V/C Ratio	0.106	-	-	0.019	-
HCM Ctrl Dly (s/v)	9.5	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	44	153	343	102	96	41
Future Vol, veh/h	44	153	343	102	96	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	1	2	0	0	0
Mvmt Flow	48	166	373	111	104	45

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	484	0	-	0	690	428
Stage 1	-	-	-	-	428	-
Stage 2	-	-	-	-	262	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1090	-	-	-	414	631
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	787	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1090	-	-	-	394	631
Mov Cap-2 Maneuver	-	-	-	-	394	-
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	787	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.89	0	17.15
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	402	-	-	-	444
HCM Lane V/C Ratio	0.044	-	-	-	0.336
HCM Ctrl Dly (s/v)	8.5	0	-	-	17.2
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.5

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	37	40	40	14	13
Future Vol, veh/h	12	37	40	40	14	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	5	0	0
Mvmt Flow	13	40	43	43	15	14

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	153	22	29	0	-	0
Stage 1	22	-	-	-	-	-
Stage 2	130	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	844	1061	1597	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	820	1061	1597	-	-	-
Mov Cap-2 Maneuver	820	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	901	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.84	3.66	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	900	-	990	-	-
HCM Lane V/C Ratio	0.027	-	0.054	-	-
HCM Ctrl Dly (s/v)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

APPENDIX E

QUEUE LENGTH REPORTS

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	205	117	3	362	26	733
v/c Ratio	0.85	0.35	0.01	0.27	0.04	0.54
Control Delay (s/veh)	83.3	45.7	7.3	7.9	5.0	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	83.3	45.7	7.3	7.9	5.0	10.5
Queue Length 50th (ft)	182	84	1	101	4	105
Queue Length 95th (ft)	250	128	4	173	m7	123
Internal Link Dist (ft)	320	436		218		663
Turn Bay Length (ft)			100		160	
Base Capacity (vph)	363	496	425	1357	723	1346
Starvation Cap Reductn	0	0	0	0	0	126
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.24	0.01	0.27	0.04	0.60

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	176	86	301	18	454	88	710
v/c Ratio	1.48	0.44	0.80	0.04	0.35	0.14	0.53
Control Delay (s/veh)	290.3	54.5	60.1	5.6	6.4	9.0	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	290.3	54.5	60.1	5.6	6.4	9.0	12.1
Queue Length 50th (ft)	~214	70	223	3	71	21	208
Queue Length 95th (ft)	#258	115	303	m11	207	m54	508
Internal Link Dist (ft)	611		323		663		99
Turn Bay Length (ft)		250		150		65	
Base Capacity (vph)	245	420	744	433	1315	632	1339
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.20	0.40	0.04	0.35	0.14	0.53

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	219	6	29	429	66	7	4	45	43	7	8
Future Vol, veh/h	17	219	6	29	429	66	7	4	45	43	7	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	90	90	90	71	71	71	66	66	66
Heavy Vehicles, %	0	2	0	0	2	8	0	0	0	17	0	13
Mvmt Flow	20	264	7	32	477	73	10	6	63	65	11	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	550	0	0	271	0	0	855	923	136	753	890	513
Stage 1	-	-	-	-	-	-	308	308	-	578	578	-
Stage 2	-	-	-	-	-	-	546	614	-	176	312	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.9	7.555	6.5	6.395
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.355	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.755	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.6615	4	3.4235
Pot Cap-1 Maneuver	1030	-	-	1304	-	-	268	272	895	290	284	534
Stage 1	-	-	-	-	-	-	682	664	-	469	504	-
Stage 2	-	-	-	-	-	-	525	486	-	772	661	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1030	-	-	1304	-	-	237	256	895	249	268	534
Mov Cap-2 Maneuver	-	-	-	-	-	-	237	256	-	249	268	-
Stage 1	-	-	-	-	-	-	667	649	-	452	486	-
Stage 2	-	-	-	-	-	-	484	468	-	696	647	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.75	0.43	12.08	24.54
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	587	244	-	-	97	-	-	271
HCM Lane V/C Ratio	0.134	0.02	-	-	0.025	-	-	0.324
HCM Ctrl Dly (s/v)	12.1	8.6	0.2	-	7.8	0	-	24.5
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	1.4

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	155	249	244	294	27	192	1392	281	87	1513
v/c Ratio	0.75	0.83	1.01	0.92	0.07	1.06	0.50	0.28	0.39	0.82
Control Delay (s/veh)	65.9	85.1	107.9	96.9	0.4	118.6	24.3	2.7	11.0	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Total Delay (s/veh)	65.9	85.1	107.9	96.9	0.4	118.6	24.3	2.7	11.0	19.7
Queue Length 50th (ft)	124	247	206	304	0	~173	338	0	14	306
Queue Length 95th (ft)	166	306	#325	#435	0	#344	382	46	m26	387
Internal Link Dist (ft)		427		923			629			156
Turn Bay Length (ft)			290			180		510		
Base Capacity (vph)	214	320	242	334	376	181	2779	994	234	1845
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	189
Spillback Cap Reductn	0	0	0	0	1	0	67	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.78	1.01	0.88	0.07	1.06	0.51	0.28	0.37	0.91

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	558	649	238	57	395
v/c Ratio	0.40	0.44	0.38	0.09	0.78
Control Delay (s/veh)	19.3	18.8	27.8	1.9	42.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	19.3	18.8	27.8	1.9	42.6
Queue Length 50th (ft)	128	145	132	0	260
Queue Length 95th (ft)	209	220	165	12	273
Internal Link Dist (ft)	923	711	1158		1799
Turn Bay Length (ft)				140	
Base Capacity (vph)	1384	1484	674	686	665
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.44	0.35	0.08	0.59

Intersection Summary

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	38	515	41	38	680
Future Vol, veh/h	39	38	515	41	38	680
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	89	89	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	67	66	579	46	42	747

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1432	602	0	0	625	0
Stage 1	602	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	149	504	-	-	966	-
Stage 1	551	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	143	504	-	-	966	-
Mov Cap-2 Maneuver	279	-	-	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	413	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	20.9	0	0.47
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	357	966	-
HCM Lane V/C Ratio	-	-	0.371	0.043	-
HCM Ctrl Dly (s/v)	-	-	20.9	8.9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.7	0.1	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	2	8	62	25	32
Future Vol, veh/h	36	2	8	62	25	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	20	0	0	4	9	0
Mvmt Flow	39	2	9	67	27	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	76	0	-	0	123	42
Stage 1	-	-	-	-	42	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	4.3	-	-	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.38	-	-	-	3.581	3.3
Pot Cap-1 Maneuver	1416	-	-	-	856	1034
Stage 1	-	-	-	-	962	-
Stage 2	-	-	-	-	925	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1416	-	-	-	832	1034
Mov Cap-2 Maneuver	-	-	-	-	832	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	925	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	7.21	0	9.13
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1415	-	-	-	935
HCM Lane V/C Ratio	0.028	-	-	-	0.066
HCM Ctrl Dly (s/v)	7.6	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	5.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	25	2	11	51	1
Future Vol, veh/h	2	25	2	11	51	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	9	0	0	5	0
Mvmt Flow	2	27	2	12	55	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	29	0	32	16
Stage 1	-	-	-	-	16	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	-	-	4.1	-	6.45	6.2
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.3
Pot Cap-1 Maneuver	-	-	1597	-	974	1069
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1597	-	973	1069
Mov Cap-2 Maneuver	-	-	-	-	973	-
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.12	8.92
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	974	-	-	277	-
HCM Lane V/C Ratio	0.058	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	49	508	84	73	674
Future Vol, veh/h	51	49	508	84	73	674
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	94	94	96	96
Heavy Vehicles, %	0	0	2	0	2	1
Mvmt Flow	56	54	540	89	76	702

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1439	585	0	0	630	0
Stage 1	585	-	-	-	-	-
Stage 2	854	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	148	515	-	-	952	-
Stage 1	561	-	-	-	-	-
Stage 2	420	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	136	515	-	-	952	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	561	-	-	-	-	-
Stage 2	387	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	19.9	0	0.89
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	350	952	-
HCM Lane V/C Ratio	-	-	0.314	0.08	-
HCM Ctrl Dly (s/v)	-	-	19.9	9.1	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.3	0.3	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	147	21	35	45	21	76
Future Vol, veh/h	147	21	35	45	21	76
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	81	81	76	76
Heavy Vehicles, %	1	0	11	0	0	2
Mvmt Flow	175	25	43	56	28	100

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	200	0	329	188
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	142	-
Critical Hdwy	-	-	4.21	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.299	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1320	-	669	855
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	890	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1320	-	647	855
Mov Cap-2 Maneuver	-	-	-	-	647	-
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	860	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.42	10.36
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	799	-	-	788	-
HCM Lane V/C Ratio	0.16	-	-	0.033	-
HCM Ctrl Dly (s/v)	10.4	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	140	120	63	1764	33	1737
v/c Ratio	0.91	0.41	0.52	0.74	0.19	0.64
Control Delay (s/veh)	122.5	35.2	36.7	12.3	5.1	4.4
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.1
Total Delay (s/veh)	122.5	35.2	36.7	12.4	5.1	4.5
Queue Length 50th (ft)	148	58	8	320	4	164
Queue Length 95th (ft)	#225	97	24	297	m7	187
Internal Link Dist (ft)		542	127	204		1084
Turn Bay Length (ft)	100				250	
Base Capacity (vph)	154	333	141	2397	278	2706
Starvation Cap Reductn	0	0	0	58	0	201
Spillback Cap Reductn	0	0	0	0	0	36
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.36	0.45	0.75	0.12	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	67	297	287	39	620	210	703
v/c Ratio	0.50	0.87	0.54	0.12	0.69	0.57	0.60
Control Delay (s/veh)	70.8	80.2	8.9	23.5	34.6	22.2	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	70.8	80.2	8.9	23.5	34.6	22.2	7.0
Queue Length 50th (ft)	56	260	0	23	520	34	86
Queue Length 95th (ft)	100	#399	78	m48	683	109	155
Internal Link Dist (ft)	176	1200			943		635
Turn Bay Length (ft)				150			
Base Capacity (vph)	181	371	558	319	905	392	1164
Starvation Cap Reductn	0	0	0	0	0	0	60
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.80	0.51	0.12	0.69	0.54	0.64

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	85	353	253	476	82	1434	11	1298
v/c Ratio	0.45	0.77	0.83	0.86	0.68	1.05	0.23	0.81
Control Delay (s/veh)	38.4	66.7	63.8	17.4	50.5	81.0	11.9	18.2
Queue Delay	0.0	11.4	60.2	53.0	0.0	20.4	18.9	51.4
Total Delay (s/veh)	38.4	78.1	124.0	70.4	50.5	101.4	30.8	69.6
Queue Length 50th (ft)	56	340	160	80	48	~844	1	623
Queue Length 95th (ft)	86	406	m86	m60	m76	#990	m0	m230
Internal Link Dist (ft)		1200		85		1084		263
Turn Bay Length (ft)					400		75	
Base Capacity (vph)	306	460	309	551	120	1361	47	1595
Starvation Cap Reductn	0	0	132	218	0	0	0	949
Spillback Cap Reductn	0	86	0	0	0	434	25	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.94	1.43	1.43	0.68	1.55	0.50	2.01

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	425	32	808	324	47	33	181
v/c Ratio	1.62	0.32	1.49	0.51	0.07	0.07	0.21
Control Delay (s/veh)	313.1	55.6	267.0	40.7	0.2	3.1	5.7
Queue Delay	0.0	0.0	1.3	29.0	0.0	0.0	4.9
Total Delay (s/veh)	313.1	55.6	268.3	69.7	0.2	3.1	10.6
Queue Length 50th (ft)	~641	26	~1165	258	0	1	6
Queue Length 95th (ft)	m#727	65	#1472	273	0	m1	m5
Internal Link Dist (ft)	85		930	1799			294
Turn Bay Length (ft)		150			120		
Base Capacity (vph)	263	101	544	641	678	492	858
Starvation Cap Reductn	0	0	0	0	0	0	604
Spillback Cap Reductn	0	0	79	320	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.62	0.32	1.74	1.01	0.07	0.07	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	328	1435	183	1260
v/c Ratio	0.30	1.05	1.13	2.25
Control Delay (s/veh)	3.7	41.9	171.0	588.0
Queue Delay	0.0	21.5	0.0	4.3
Total Delay (s/veh)	3.7	63.4	171.0	592.3
Queue Length 50th (ft)	27	~828	~241	~1041
Queue Length 95th (ft)	m9	m#149	#418	#1171
Internal Link Dist (ft)		263		880
Turn Bay Length (ft)			130	
Base Capacity (vph)	1091	1371	162	560
Starvation Cap Reductn	0	81	0	0
Spillback Cap Reductn	0	0	0	210
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.30	1.11	1.13	3.60

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	301	282	22	282	525	635	272
v/c Ratio	0.86	0.47	0.05	0.68	0.43	0.66	0.30
Control Delay (s/veh)	72.7	6.7	25.1	28.5	14.2	23.8	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay (s/veh)	72.7	6.7	25.1	28.5	14.5	23.8	4.8
Queue Length 50th (ft)	260	1	9	112	145	461	30
Queue Length 95th (ft)	335	55	30	215	332	m646	m55
Internal Link Dist (ft)		576	380		635	903	
Turn Bay Length (ft)	175			330			175
Base Capacity (vph)	429	676	509	423	1222	969	895
Starvation Cap Reductn	0	0	0	0	252	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.42	0.04	0.67	0.54	0.66	0.30

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	487	777	200	649
v/c Ratio	0.92	0.90	0.80	0.57
Control Delay (s/veh)	68.1	51.4	47.1	19.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	68.1	51.4	47.1	19.1
Queue Length 50th (ft)	400	604	97	348
Queue Length 95th (ft)	#577	#917	#194	404
Internal Link Dist (ft)	639	903		1234
Turn Bay Length (ft)			125	
Base Capacity (vph)	579	865	251	1146
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.84	0.90	0.80	0.57

Intersection Summary

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

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	193	56	256	270
v/c Ratio	0.76	0.17	0.19	0.12
Control Delay (s/veh)	64.3	36.2	6.6	4.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	64.3	36.2	6.6	4.0
Queue Length 50th (ft)	142	33	57	26
Queue Length 95th (ft)	212	50	108	30
Internal Link Dist (ft)	320	436	218	663
Turn Bay Length (ft)				
Base Capacity (vph)	338	435	1326	2198
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.57	0.13	0.19	0.12

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	204	132	120	14	426	93	217
v/c Ratio	0.83	0.49	0.34	0.02	0.33	0.15	0.17
Control Delay (s/veh)	71.8	50.2	9.6	5.2	6.7	6.6	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	71.8	50.2	9.6	5.2	6.7	6.6	6.0
Queue Length 50th (ft)	150	94	0	3	133	15	33
Queue Length 95th (ft)	204	129	34	m9	185	29	55
Internal Link Dist (ft)	611	323			663		99
Turn Bay Length (ft)				150		65	
Base Capacity (vph)	349	382	445	862	1276	629	1284
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.35	0.27	0.02	0.33	0.15	0.17

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	203	10	17	177	24	6	4	66	3	5	3
Future Vol, veh/h	22	203	10	17	177	24	6	4	66	3	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	88	88	88	86	86	86	46	46	46
Heavy Vehicles, %	9	6	0	12	8	8	0	0	2	33	0	0
Mvmt Flow	27	251	12	19	201	27	7	5	77	7	11	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	228	0	0	263	0	0	456	578	131	435	571	114
Stage 1	-	-	-	-	-	-	311	311	-	253	253	-
Stage 2	-	-	-	-	-	-	145	267	-	182	317	-
Critical Hdwy	4.28	-	-	4.34	-	-	7.5	6.5	6.94	8.16	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	7.16	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	7.16	5.5	-
Follow-up Hdwy	2.29	-	-	2.32	-	-	3.5	4	3.32	3.83	4	3.3
Pot Cap-1 Maneuver	1287	-	-	1229	-	-	493	429	894	438	434	923
Stage 1	-	-	-	-	-	-	680	662	-	648	701	-
Stage 2	-	-	-	-	-	-	849	692	-	720	658	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1287	-	-	1229	-	-	458	413	894	380	417	923
Mov Cap-2 Maneuver	-	-	-	-	-	-	458	413	-	380	417	-
Stage 1	-	-	-	-	-	-	664	647	-	637	689	-
Stage 2	-	-	-	-	-	-	816	680	-	638	643	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.86	0.71	10.16	12.97
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	786	316	-	-	241	-	-	475
HCM Lane V/C Ratio	0.112	0.021	-	-	0.016	-	-	0.05
HCM Ctrl Dly (s/v)	10.2	7.9	0.1	-	8	0.1	-	13
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.2

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	113	210	89	151	47	1004	382	133	1008
v/c Ratio	0.37	0.76	0.46	0.35	0.17	0.37	0.37	0.37	0.50
Control Delay (s/veh)	43.2	73.0	47.2	48.5	11.5	19.8	3.0	11.7	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	43.2	73.0	47.2	48.5	11.5	19.8	3.0	11.7	15.5
Queue Length 50th (ft)	82	185	64	55	14	185	0	28	262
Queue Length 95th (ft)	127	260	104	90	35	258	56	45	317
Internal Link Dist (ft)		427		923		629			156
Turn Bay Length (ft)			290		180		510		
Base Capacity (vph)	403	435	196	472	305	2709	1034	468	2012
Starvation Cap Reductn	0	0	0	0	0	0	0	0	300
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.48	0.45	0.32	0.15	0.37	0.37	0.28	0.59

Intersection Summary

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	731	397	44	23	267
v/c Ratio	0.37	0.21	0.10	0.05	0.70
Control Delay (s/veh)	12.8	10.7	29.3	0.2	47.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.8	10.7	29.3	0.2	47.2
Queue Length 50th (ft)	134	61	25	0	183
Queue Length 95th (ft)	224	90	48	0	243
Internal Link Dist (ft)	923	711	1158		1799
Turn Bay Length (ft)				140	
Base Capacity (vph)	1966	1881	523	576	603
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.21	0.08	0.04	0.44

Intersection Summary

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	4	439	8	5	264
Future Vol, veh/h	5	4	439	8	5	264
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	93	93	91	91
Heavy Vehicles, %	20	25	6	25	20	7
Mvmt Flow	7	5	472	9	5	290

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	777	476	0	0	481	0
Stage 1	476	-	-	-	-	-
Stage 2	301	-	-	-	-	-
Critical Hdwy	6.6	6.45	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.525	-	-	2.38	-
Pot Cap-1 Maneuver	341	544	-	-	994	-
Stage 1	589	-	-	-	-	-
Stage 2	711	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	339	544	-	-	994	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	589	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.62	0	0.16
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	485	994	-
HCM Lane V/C Ratio	-	-	0.025	0.006	-
HCM Ctrl Dly (s/v)	-	-	12.6	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	12	7	42	9	2
Future Vol, veh/h	1	12	7	42	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	25	14	7	22	0
Mvmt Flow	1	13	8	46	10	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	53	0	-	0	46	30
Stage 1	-	-	-	-	30	-
Stage 2	-	-	-	-	15	-
Critical Hdwy	4.1	-	-	-	6.62	6.2
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	2.2	-	-	-	3.698	3.3
Pot Cap-1 Maneuver	1565	-	-	-	916	1050
Stage 1	-	-	-	-	943	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1565	-	-	-	916	1050
Mov Cap-2 Maneuver	-	-	-	-	916	-
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	958	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.56	0	8.89
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	138	-	-	-	937
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Ctrl Dly (s/v)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	5.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	12	3	4	45	4
Future Vol, veh/h	9	12	3	4	45	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	17	0	0	9	0
Mvmt Flow	10	13	3	4	49	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	23	0	27	16
Stage 1	-	-	-	-	16	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.2	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1606	-	970	1069
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1606	-	968	1069
Mov Cap-2 Maneuver	-	-	-	-	968	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.11	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	976	-	-	771	-
HCM Lane V/C Ratio	0.055	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	18	19	383	94	38	256
Future Vol, veh/h	18	19	383	94	38	256
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	95	95	88	88
Heavy Vehicles, %	6	11	8	2	0	7
Mvmt Flow	23	25	403	99	43	291

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	830	453	0	0	502	0
Stage 1	453	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Critical Hdwy	6.46	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	335	589	-	-	1073	-
Stage 1	632	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	321	589	-	-	1073	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	657	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.86	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	506	1073	-
HCM Lane V/C Ratio	-	-	0.095	0.04	-
HCM Ctrl Dly (s/v)	-	-	12.9	8.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	120	4	7	25	8	36
Future Vol, veh/h	120	4	7	25	8	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	55	55	69	69
Heavy Vehicles, %	1	0	29	8	0	11
Mvmt Flow	150	5	13	45	12	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	155	0	223	153
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	71	-
Critical Hdwy	-	-	4.39	-	6.4	6.31
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.461	-	3.5	3.399
Pot Cap-1 Maneuver	-	-	1276	-	769	870
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1276	-	761	870
Mov Cap-2 Maneuver	-	-	-	-	761	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	947	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.72	9.59
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	848	-	-	394	-
HCM Lane V/C Ratio	0.075	-	-	0.01	-
HCM Ctrl Dly (s/v)	9.6	-	-	7.8	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	70	63	17	1151	28	1218
v/c Ratio	0.53	0.22	0.09	0.45	0.07	0.42
Control Delay (s/veh)	75.8	1.8	1.1	6.4	4.1	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	75.8	1.8	1.1	6.4	4.1	3.9
Queue Length 50th (ft)	62	0	0	111	3	88
Queue Length 95th (ft)	100	0	0	140	m10	167
Internal Link Dist (ft)		542	127	204		1084
Turn Bay Length (ft)	100				250	
Base Capacity (vph)	173	432	219	2575	471	2888
Starvation Cap Reductn	0	0	0	115	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.15	0.08	0.47	0.06	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	40	146	205	13	432	227	372
v/c Ratio	0.34	0.65	0.55	0.03	0.49	0.41	0.33
Control Delay (s/veh)	56.5	62.3	11.9	13.3	23.4	8.5	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	56.5	62.3	11.9	13.3	23.4	8.5	12.0
Queue Length 50th (ft)	27	109	0	3	181	69	131
Queue Length 95th (ft)	48	164	61	m14	366	m89	m243
Internal Link Dist (ft)	176	1200			943		635
Turn Bay Length (ft)				155			
Base Capacity (vph)	335	354	465	498	877	558	1122
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.41	0.44	0.03	0.49	0.41	0.33

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	481	485	60	1095	4	943
v/c Ratio	0.71	0.86dl	0.20	0.65	0.03	0.50
Control Delay (s/veh)	49.1	17.8	10.2	16.8	6.3	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	2.7
Total Delay (s/veh)	49.1	17.8	10.2	16.8	6.3	9.7
Queue Length 50th (ft)	195	46	13	191	0	157
Queue Length 95th (ft)	245	280	30	173	m1	m154
Internal Link Dist (ft)	1200	85		1084		263
Turn Bay Length (ft)			400		75	
Base Capacity (vph)	682	658	325	1686	149	1887
Starvation Cap Reductn	0	0	0	0	0	794
Spillback Cap Reductn	0	0	0	8	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.74	0.18	0.65	0.03	0.86

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Lane Group	EBT	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	395	523	76	23	98	162
v/c Ratio	0.42	0.56	0.10	0.03	0.13	0.16
Control Delay (s/veh)	9.5	43.4	19.4	0.0	5.4	8.9
Queue Delay	2.9	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	12.5	43.5	19.4	0.0	5.4	8.9
Queue Length 50th (ft)	34	203	36	0	5	141
Queue Length 95th (ft)	43	251	66	0	m4	m115
Internal Link Dist (ft)	85	930	1799			294
Turn Bay Length (ft)				120		
Base Capacity (vph)	948	1006	795	782	777	1000
Starvation Cap Reductn	433	0	0	0	0	0
Spillback Cap Reductn	0	16	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.53	0.10	0.03	0.13	0.16

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	107	1078	209	961
v/c Ratio	0.12	0.63	1.39	1.04
Control Delay (s/veh)	0.4	8.5	258.2	63.6
Queue Delay	0.0	0.2	0.0	3.2
Total Delay (s/veh)	0.4	8.7	258.2	66.8
Queue Length 50th (ft)	0	61	~289	~336
Queue Length 95th (ft)	0	108	#455	#502
Internal Link Dist (ft)		263		880
Turn Bay Length (ft)			130	
Base Capacity (vph)	920	1710	150	926
Starvation Cap Reductn	0	121	0	0
Spillback Cap Reductn	0	0	0	8
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.12	0.68	1.39	1.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	615	8	229	282	509
v/c Ratio	0.85	0.10	0.66	0.34	0.45
Control Delay (s/veh)	42.1	44.2	31.9	21.1	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	42.1	44.2	31.9	21.1	15.9
Queue Length 50th (ft)	387	3	79	98	103
Queue Length 95th (ft)	#684	16	144	148	105
Internal Link Dist (ft)	576	380		635	903
Turn Bay Length (ft)			280		
Base Capacity (vph)	725	125	348	840	1124
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.85	0.06	0.66	0.34	0.45

Intersection Summary

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

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	248	600	601
v/c Ratio	0.78	0.48	0.41
Control Delay (s/veh)	58.9	11.8	8.7
Queue Delay	0.0	0.0	0.0
Total Delay (s/veh)	58.9	11.8	8.7
Queue Length 50th (ft)	171	230	87
Queue Length 95th (ft)	245	m299	145
Internal Link Dist (ft)	639	903	1234
Turn Bay Length (ft)			
Base Capacity (vph)	441	1240	1449
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.56	0.48	0.41

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	181	111	319	687
v/c Ratio	0.83	0.38	0.23	0.28
Control Delay (s/veh)	84.6	48.4	6.5	4.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	84.6	48.4	6.5	4.8
Queue Length 50th (ft)	160	82	78	47
Queue Length 95th (ft)	226	127	137	79
Internal Link Dist (ft)	320	436	218	663
Turn Bay Length (ft)				
Base Capacity (vph)	368	497	1391	2460
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.49	0.22	0.23	0.28

Intersection Summary

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	169	206	126	16	390	56	650
v/c Ratio	0.98	0.85	0.33	0.03	0.29	0.08	0.47
Control Delay (s/veh)	116.9	85.4	9.4	4.7	5.1	6.9	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	116.9	85.4	9.4	4.7	5.1	6.9	9.3
Queue Length 50th (ft)	147	184	0	2	63	11	256
Queue Length 95th (ft)	183	260	53	m8	154	m33	m352
Internal Link Dist (ft)	611	323			663		99
Turn Bay Length (ft)				150		65	
Base Capacity (vph)	398	576	733	501	1355	715	1376
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.36	0.17	0.03	0.29	0.08	0.47

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	127	6	28	321	25	7	4	43	6	7	8
Future Vol, veh/h	16	127	6	28	321	25	7	4	43	6	7	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	90	90	90	71	71	71	66	66	66
Heavy Vehicles, %	0	2	0	0	2	8	0	0	0	17	0	13
Mvmt Flow	19	153	7	31	357	28	10	6	61	9	11	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	384	0	0	160	0	0	441	642	80	551	632	192
Stage 1	-	-	-	-	-	-	195	195	-	433	433	-
Stage 2	-	-	-	-	-	-	246	447	-	118	199	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.84	6.5	7.16
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.84	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.84	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.67	4	3.43
Pot Cap-1 Maneuver	1185	-	-	1431	-	-	505	395	970	386	400	784
Stage 1	-	-	-	-	-	-	794	743	-	533	585	-
Stage 2	-	-	-	-	-	-	742	577	-	832	740	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1185	-	-	1431	-	-	464	379	970	342	384	784
Mov Cap-2 Maneuver	-	-	-	-	-	-	464	379	-	342	384	-
Stage 1	-	-	-	-	-	-	780	730	-	520	571	-
Stage 2	-	-	-	-	-	-	699	563	-	761	728	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.96	0.7	10.17	13.47
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	772	364	-	-	245	-	-	457
HCM Lane V/C Ratio	0.099	0.016	-	-	0.022	-	-	0.07
HCM Ctrl Dly (s/v)	10.2	8.1	0.1	-	7.6	0.2	-	13.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.2

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	104	134	233	233	144	1324	267	83	1400
v/c Ratio	0.42	0.69	0.92	0.54	0.59	0.43	0.25	0.31	0.69
Control Delay (s/veh)	53.9	85.2	94.0	68.4	21.9	18.3	2.3	9.0	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay (s/veh)	53.9	85.2	94.0	68.4	21.9	18.3	2.3	9.0	14.8
Queue Length 50th (ft)	89	135	217	119	48	261	0	14	320
Queue Length 95th (ft)	122	178	#301	154	100	338	43	26	370
Internal Link Dist (ft)		427		923		629			156
Turn Bay Length (ft)			290		180		510		
Base Capacity (vph)	269	321	254	632	248	3086	1067	281	2042
Starvation Cap Reductn	0	0	0	0	0	0	0	0	196
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.42	0.92	0.37	0.58	0.43	0.25	0.30	0.76

Intersection Summary

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

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	466	573	213	55	362
v/c Ratio	0.29	0.35	0.36	0.09	0.80
Control Delay (s/veh)	15.1	14.7	30.5	2.1	48.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	15.1	14.7	30.5	2.1	48.0
Queue Length 50th (ft)	90	107	124	0	248
Queue Length 95th (ft)	154	170	158	12	266
Internal Link Dist (ft)	923	711	1158		1799
Turn Bay Length (ft)				140	
Base Capacity (vph)	1589	1623	679	657	670
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.35	0.31	0.08	0.54

Intersection Summary

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	473	8	4	629
Future Vol, veh/h	7	7	473	8	4	629
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	89	89	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	12	12	531	9	4	691

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1236	536	0	0	540	0
Stage 1	536	-	-	-	-	-
Stage 2	700	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	196	549	-	-	1038	-
Stage 1	591	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	196	549	-	-	1038	-
Mov Cap-2 Maneuver	334	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	494	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.21	0	0.05
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	415	1038	-
HCM Lane V/C Ratio	-	-	0.058	0.004	-
HCM Ctrl Dly (s/v)	-	-	14.2	8.5	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	2	8	48	11	6
Future Vol, veh/h	10	2	8	48	11	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	20	0	0	4	9	0
Mvmt Flow	11	2	9	52	12	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	61	0	-	0	59	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	24	-
Critical Hdwy	4.3	-	-	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.38	-	-	-	3.581	3.3
Pot Cap-1 Maneuver	1435	-	-	-	931	1044
Stage 1	-	-	-	-	970	-
Stage 2	-	-	-	-	981	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1435	-	-	-	924	1044
Mov Cap-2 Maneuver	-	-	-	-	924	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	981	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	6.27	0	8.81
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1433	-	-	-	963
HCM Lane V/C Ratio	0.008	-	-	-	0.019
HCM Ctrl Dly (s/v)	7.5	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	5.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	11	2	10	37	1
Future Vol, veh/h	2	11	2	10	37	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	9	0	0	5	0
Mvmt Flow	2	12	2	11	40	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	14	0	23	8
Stage 1	-	-	-	-	8	-
Stage 2	-	-	-	-	15	-
Critical Hdwy	-	-	4.1	-	6.45	6.2
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.3
Pot Cap-1 Maneuver	-	-	1617	-	985	1080
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	1000	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1617	-	984	1080
Mov Cap-2 Maneuver	-	-	-	-	984	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	998	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.2	8.81
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	986	-	-	300	-
HCM Lane V/C Ratio	0.042	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.8	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	49	35	437	80	57	591
Future Vol, veh/h	49	35	437	80	57	591
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	94	94	96	96
Heavy Vehicles, %	0	0	2	0	2	1
Mvmt Flow	54	38	465	85	59	616

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1242	507	0	0	550	0
Stage 1	507	-	-	-	-	-
Stage 2	734	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	195	569	-	-	1020	-
Stage 1	609	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	183	569	-	-	1020	-
Mov Cap-2 Maneuver	317	-	-	-	-	-
Stage 1	609	-	-	-	-	-
Stage 2	450	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	17.11	0	0.77
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	389	1020	-
HCM Lane V/C Ratio	-	-	0.237	0.058	-
HCM Ctrl Dly (s/v)	-	-	17.1	8.7	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	0.9	0.2	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	140	8	9	43	9	49
Future Vol, veh/h	140	8	9	43	9	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	81	81	76	76
Heavy Vehicles, %	1	0	11	0	0	2
Mvmt Flow	167	10	11	53	12	64

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	176	0	247	171
Stage 1	-	-	-	-	171	-
Stage 2	-	-	-	-	75	-
Critical Hdwy	-	-	4.21	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.299	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1347	-	746	872
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	953	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1347	-	740	872
Mov Cap-2 Maneuver	-	-	-	-	740	-
Stage 1	-	-	-	-	863	-
Stage 2	-	-	-	-	945	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.33	9.66
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	849	-	-	312	-
HCM Lane V/C Ratio	0.09	-	-	0.008	-
HCM Ctrl Dly (s/v)	9.7	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	118	98	60	1639	31	1596
v/c Ratio	0.80	0.33	0.51	0.68	0.15	0.58
Control Delay (s/veh)	107.1	22.9	36.8	9.6	5.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	107.1	22.9	36.8	9.6	5.1	5.6
Queue Length 50th (ft)	123	25	8	224	6	200
Queue Length 95th (ft)	#175	61	22	239	m8	204
Internal Link Dist (ft)		542	127	204		1084
Turn Bay Length (ft)	100				250	
Base Capacity (vph)	154	344	138	2414	307	2729
Starvation Cap Reductn	0	0	0	57	0	0
Spillback Cap Reductn	0	0	0	0	0	3
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.28	0.43	0.70	0.10	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	64	270	273	37	528	200	618
v/c Ratio	0.48	0.89	0.55	0.09	0.56	0.43	0.58
Control Delay (s/veh)	68.9	86.8	9.9	9.2	21.6	8.9	12.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	68.9	86.8	9.9	9.2	21.6	8.9	12.9
Queue Length 50th (ft)	53	240	0	9	315	44	209
Queue Length 95th (ft)	96	#389	81	23	476	m68	m258
Internal Link Dist (ft)	176	1200			943		635
Turn Bay Length (ft)				155			
Base Capacity (vph)	309	320	509	409	945	465	1066
Starvation Cap Reductn	0	0	0	0	0	0	29
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.84	0.54	0.09	0.56	0.43	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	402	665	78	1317	11	1191
v/c Ratio	0.56	0.82	0.38	0.81	0.17	0.71
Control Delay (s/veh)	43.2	17.5	20.4	30.0	10.9	12.9
Queue Delay	0.1	0.0	0.0	0.2	0.1	50.3
Total Delay (s/veh)	43.3	17.5	20.4	30.2	11.0	63.2
Queue Length 50th (ft)	167	44	28	258	4	355
Queue Length 95th (ft)	195	51	m58	494	m3	m165
Internal Link Dist (ft)	1200	85		1084		263
Turn Bay Length (ft)			400		75	
Base Capacity (vph)	721	848	263	1624	64	1680
Starvation Cap Reductn	0	0	0	0	0	816
Spillback Cap Reductn	20	0	0	30	2	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.78	0.30	0.83	0.18	1.38

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	378	773	306	44	32	172
v/c Ratio	0.33	0.69	0.40	0.06	0.06	0.19
Control Delay (s/veh)	15.5	47.1	30.3	0.2	5.8	11.5
Queue Delay	2.4	0.2	0.0	0.0	0.0	2.4
Total Delay (s/veh)	17.9	47.3	30.3	0.2	5.8	13.8
Queue Length 50th (ft)	64	351	208	0	1	176
Queue Length 95th (ft)	77	425	223	0	m7	m125
Internal Link Dist (ft)	85	920	1799			294
Turn Bay Length (ft)				120		
Base Capacity (vph)	1137	1177	771	759	549	904
Starvation Cap Reductn	612	0	0	0	0	608
Spillback Cap Reductn	0	55	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.69	0.40	0.06	0.06	0.58

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	312	1328	174	1157
v/c Ratio	0.31	0.81	1.47	1.64
Control Delay (s/veh)	3.6	12.3	300.2	319.9
Queue Delay	0.0	0.7	0.0	0.9
Total Delay (s/veh)	3.6	13.0	300.2	320.9
Queue Length 50th (ft)	25	104	~305	~874
Queue Length 95th (ft)	25	123	#479	#1080
Internal Link Dist (ft)		263		880
Turn Bay Length (ft)			130	
Base Capacity (vph)	998	1636	118	704
Starvation Cap Reductn	0	96	0	0
Spillback Cap Reductn	0	0	0	92
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.86	1.47	1.89

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Lane Group	EBT	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	540	22	255	459	821
v/c Ratio	0.95	0.24	0.81	0.47	0.63
Control Delay (s/veh)	69.6	50.3	50.5	16.8	26.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	69.6	50.3	50.5	16.8	26.5
Queue Length 50th (ft)	449	12	127	145	211
Queue Length 95th (ft)	#646	41	#202	252	277
Internal Link Dist (ft)	576	380		635	903
Turn Bay Length (ft)			280		
Base Capacity (vph)	577	117	313	981	1303
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	0.19	0.81	0.47	0.63

Intersection Summary

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

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	449	701	776
v/c Ratio	0.90	0.62	0.60
Control Delay (s/veh)	66.3	13.5	18.9
Queue Delay	0.0	0.0	0.0
Total Delay (s/veh)	66.3	13.5	18.9
Queue Length 50th (ft)	369	274	214
Queue Length 95th (ft)	487	m454	259
Internal Link Dist (ft)	639	903	1234
Turn Bay Length (ft)			
Base Capacity (vph)	579	1133	1285
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.78	0.62	0.60

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	201	59	4	266	39	245
v/c Ratio	0.73	0.17	0.00	0.20	0.05	0.19
Control Delay (s/veh)	59.3	33.8	7.5	7.5	7.4	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	59.3	33.8	7.5	7.5	7.4	7.0
Queue Length 50th (ft)	146	34	1	63	5	34
Queue Length 95th (ft)	210	50	6	125	m21	92
Internal Link Dist (ft)	320	436		218		663
Turn Bay Length (ft)			100		160	
Base Capacity (vph)	631	808	811	1304	795	1281
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.07	0.00	0.20	0.05	0.19

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	214	24	240	15	448	98	229
v/c Ratio	1.26	0.16	0.71	0.02	0.36	0.16	0.18
Control Delay (s/veh)	194.7	40.7	47.5	7.1	10.4	5.3	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	194.7	40.7	47.5	7.1	10.4	5.3	4.6
Queue Length 50th (ft)	~204	16	140	4	197	12	27
Queue Length 95th (ft)	#280	34	180	13	303	39	71
Internal Link Dist (ft)	611		323		663		99
Turn Bay Length (ft)		250		150		65	
Base Capacity (vph)	314	290	588	840	1254	597	1263
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.08	0.41	0.02	0.36	0.16	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	213	11	18	186	25	6	4	69	3	5	3
Future Vol, veh/h	23	213	11	18	186	25	6	4	69	3	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	88	88	88	86	86	86	46	46	46
Heavy Vehicles, %	9	6	0	12	8	8	0	0	2	33	0	0
Mvmt Flow	28	263	14	20	211	28	7	5	80	7	11	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	240	0	0	277	0	0	584	607	138	457	600	226
Stage 1	-	-	-	-	-	-	327	327	-	266	266	-
Stage 2	-	-	-	-	-	-	258	281	-	191	333	-
Critical Hdwy	4.235	-	-	4.28	-	-	7.3	6.5	6.93	7.795	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.595	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.995	5.5	-
Follow-up Hdwy	2.2855	-	-	2.314	-	-	3.5	4	3.319	3.8135	4	3.3
Pot Cap-1 Maneuver	1281	-	-	1222	-	-	412	413	885	443	417	819
Stage 1	-	-	-	-	-	-	666	652	-	665	692	-
Stage 2	-	-	-	-	-	-	751	682	-	720	647	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1281	-	-	1222	-	-	381	396	885	381	400	819
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	396	-	381	400	-
Stage 1	-	-	-	-	-	-	650	636	-	652	679	-
Stage 2	-	-	-	-	-	-	719	669	-	634	632	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.87	0.63	10.38	13.31
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	761	314	-	-	138	-	-	457
HCM Lane V/C Ratio	0.121	0.022	-	-	0.017	-	-	0.052
HCM Ctrl Dly (s/v)	10.4	7.9	0.2	-	8	0	-	13.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.2

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	119	220	93	122	38	49	1055	401	139	1059
v/c Ratio	0.40	0.77	0.48	0.54	0.10	0.18	0.40	0.39	0.41	0.53
Control Delay (s/veh)	43.5	72.8	47.5	65.9	0.5	12.1	20.8	3.1	11.3	10.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	43.5	72.8	47.5	65.9	0.5	12.1	20.8	3.1	11.3	10.9
Queue Length 50th (ft)	86	193	66	105	0	15	201	0	20	165
Queue Length 95th (ft)	131	271	107	170	0	36	279	58	44	220
Internal Link Dist (ft)		427		923			629			156
Turn Bay Length (ft)			290			180		510		
Base Capacity (vph)	395	435	196	244	406	285	2670	1033	448	1990
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	260
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.51	0.47	0.50	0.09	0.17	0.40	0.39	0.31	0.61

Intersection Summary

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	770	418	46	24	282
v/c Ratio	0.40	0.23	0.10	0.05	0.71
Control Delay (s/veh)	13.9	11.6	28.2	0.2	46.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	13.9	11.6	28.2	0.2	46.4
Queue Length 50th (ft)	150	67	26	0	192
Queue Length 95th (ft)	246	98	48	0	252
Internal Link Dist (ft)	923	711	1158		1799
Turn Bay Length (ft)				140	
Base Capacity (vph)	1920	1825	527	585	602
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.23	0.09	0.04	0.47

Intersection Summary

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	4	461	8	5	277
Future Vol, veh/h	5	4	461	8	5	277
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	93	93	91	91
Heavy Vehicles, %	20	25	6	25	20	7
Mvmt Flow	7	5	496	9	5	304

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	815	500	0	0	504	0
Stage 1	500	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Critical Hdwy	6.6	6.45	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.525	-	-	2.38	-
Pot Cap-1 Maneuver	323	527	-	-	974	-
Stage 1	574	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	322	527	-	-	974	-
Mov Cap-2 Maneuver	431	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	697	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	12.87	0	0.15
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	469	974	-
HCM Lane V/C Ratio	-	-	0.026	0.006	-
HCM Ctrl Dly (s/v)	-	-	12.9	8.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	13	7	44	9	2
Future Vol, veh/h	1	13	7	44	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	25	14	7	22	0
Mvmt Flow	1	14	8	48	10	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	55	0	-	0	48	32
Stage 1	-	-	-	-	32	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	4.1	-	-	-	6.62	6.2
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	2.2	-	-	-	3.698	3.3
Pot Cap-1 Maneuver	1562	-	-	-	914	1048
Stage 1	-	-	-	-	942	-
Stage 2	-	-	-	-	957	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1562	-	-	-	913	1048
Mov Cap-2 Maneuver	-	-	-	-	913	-
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	957	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.52	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	129	-	-	-	935
HCM Lane V/C Ratio	0.001	-	-	-	0.013
HCM Ctrl Dly (s/v)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	13	3	4	47	4
Future Vol, veh/h	9	13	3	4	47	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	17	0	0	9	0
Mvmt Flow	10	14	3	4	51	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	24	0	28	17
Stage 1	-	-	-	-	17	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.2	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1604	-	970	1068
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1604	-	968	1068
Mov Cap-2 Maneuver	-	-	-	-	968	-
Stage 1	-	-	-	-	988	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.11	8.92
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	975	-	-	771	-
HCM Lane V/C Ratio	0.057	-	-	0.002	-
HCM Ctrl Dly (s/v)	8.9	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	20	403	99	40	269
Future Vol, veh/h	19	20	403	99	40	269
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	95	95	88	88
Heavy Vehicles, %	6	11	8	2	0	7
Mvmt Flow	25	26	424	104	45	306

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	873	476	0	0	528	0
Stage 1	476	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.46	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	316	571	-	-	1049	-
Stage 1	617	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	302	571	-	-	1049	-
Mov Cap-2 Maneuver	425	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	642	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.21	0	1.11
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	489	1049	-
HCM Lane V/C Ratio	-	-	0.104	0.043	-
HCM Ctrl Dly (s/v)	-	-	13.2	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	126	4	7	26	8	38
Future Vol, veh/h	126	4	7	26	8	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	55	55	69	69
Heavy Vehicles, %	1	0	29	8	0	11
Mvmt Flow	158	5	13	47	12	55

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	163	0	233	160
Stage 1	-	-	-	-	160	-
Stage 2	-	-	-	-	73	-
Critical Hdwy	-	-	4.39	-	6.4	6.31
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.461	-	3.5	3.399
Pot Cap-1 Maneuver	-	-	1268	-	760	862
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	955	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1268	-	752	862
Mov Cap-2 Maneuver	-	-	-	-	752	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	945	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.67	9.65
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	841	-	-	382	-
HCM Lane V/C Ratio	0.079	-	-	0.01	-
HCM Ctrl Dly (s/v)	9.7	-	-	7.9	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	74	66	17	1210	30	1280
v/c Ratio	0.55	0.24	0.09	0.47	0.08	0.44
Control Delay (s/veh)	76.5	3.4	1.1	6.6	3.0	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	76.5	3.4	1.1	6.6	3.0	2.5
Queue Length 50th (ft)	66	0	0	128	2	44
Queue Length 95th (ft)	105	0	0	163	m6	110
Internal Link Dist (ft)		542	127	204		1084
Turn Bay Length (ft)	100				250	
Base Capacity (vph)	173	421	219	2569	449	2886
Starvation Cap Reductn	0	0	0	114	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.16	0.08	0.49	0.07	0.44

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	153	215	14	454	238	391
v/c Ratio	0.36	0.69	0.57	0.04	0.51	0.44	0.33
Control Delay (s/veh)	58.1	65.7	12.3	15.1	19.7	9.8	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.1	65.7	12.3	15.1	19.7	9.8	5.2
Queue Length 50th (ft)	30	114	0	5	274	35	59
Queue Length 95th (ft)	51	176	63	m14	432	57	87
Internal Link Dist (ft)	176	1200			943		635
Turn Bay Length (ft)				150			
Base Capacity (vph)	196	279	419	395	892	570	1196
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.55	0.51	0.04	0.51	0.42	0.33

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	81	425	173	338	63	1152	4	991
v/c Ratio	0.27	0.84	0.65	0.60	0.35	0.98	0.07	0.66
Control Delay (s/veh)	27.2	63.7	55.0	10.7	30.6	61.5	6.0	11.3
Queue Delay	0.0	8.9	15.4	10.4	0.0	39.5	0.0	51.2
Total Delay (s/veh)	27.2	72.5	70.4	21.1	30.6	100.9	6.0	62.4
Queue Length 50th (ft)	44	362	83	33	26	306	0	367
Queue Length 95th (ft)	76	#533	m101	m49	74	#682	m0	m16
Internal Link Dist (ft)		1200		85		1084		263
Turn Bay Length (ft)					400		75	
Base Capacity (vph)	424	504	308	564	179	1174	55	1497
Starvation Cap Reductn	0	0	115	194	0	0	0	747
Spillback Cap Reductn	0	57	0	0	0	131	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.95	0.90	0.91	0.35	1.10	0.07	1.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	416	14	536	80	24	102	170
v/c Ratio	1.05	0.11	0.97	0.15	0.04	0.16	0.21
Control Delay (s/veh)	67.6	39.1	78.0	32.8	0.1	4.4	5.9
Queue Delay	0.0	0.0	12.7	0.6	0.0	0.0	0.0
Total Delay (s/veh)	67.6	39.1	90.7	33.4	0.1	4.4	5.9
Queue Length 50th (ft)	~411	9	479	50	0	5	10
Queue Length 95th (ft)	m#540	28	#714	92	0	m5	m8
Internal Link Dist (ft)	85		930	1799			294
Turn Bay Length (ft)		150			120		
Base Capacity (vph)	395	125	555	547	611	639	793
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	30	265	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.11	1.02	0.28	0.04	0.16	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	113	1134	220	1010
v/c Ratio	0.10	0.95	1.29	1.63
Control Delay (s/veh)	0.2	24.8	216.4	313.3
Queue Delay	0.0	10.5	0.0	1.9
Total Delay (s/veh)	0.2	35.3	216.4	315.2
Queue Length 50th (ft)	0	110	~279	~592
Queue Length 95th (ft)	m0	m122	#465	#737
Internal Link Dist (ft)		263		880
Turn Bay Length (ft)			130	
Base Capacity (vph)	1170	1190	170	620
Starvation Cap Reductn	0	68	0	0
Spillback Cap Reductn	0	0	0	135
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.10	1.01	1.29	2.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	340	307	8	241	296	284	250
v/c Ratio	0.82	0.44	0.02	0.41	0.27	0.37	0.31
Control Delay (s/veh)	53.8	4.9	18.5	24.1	22.7	23.2	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.8	4.9	18.5	24.1	22.7	23.2	3.8
Queue Length 50th (ft)	243	1	2	105	130	131	25
Queue Length 95th (ft)	314	56	10	221	264	m293	m65
Internal Link Dist (ft)		576	380		635	903	
Turn Bay Length (ft)	175			330			175
Base Capacity (vph)	549	816	546	655	1090	774	806
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.38	0.01	0.37	0.27	0.37	0.31

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	260	631	275	357
v/c Ratio	0.83	0.64	0.58	0.27
Control Delay (s/veh)	66.2	36.5	11.7	6.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	66.2	36.5	11.7	6.9
Queue Length 50th (ft)	180	411	66	90
Queue Length 95th (ft)	#281	605	101	132
Internal Link Dist (ft)	639	903		1234
Turn Bay Length (ft)			125	
Base Capacity (vph)	358	988	557	1315
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.73	0.64	0.49	0.27

Intersection Summary

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

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	190	117	3	332	26	695
v/c Ratio	0.84	0.38	0.01	0.24	0.03	0.51
Control Delay (s/veh)	84.8	47.8	6.7	7.0	5.2	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	84.8	47.8	6.7	7.0	5.2	6.5
Queue Length 50th (ft)	168	86	1	85	4	121
Queue Length 95th (ft)	235	131	4	149	m11	m185
Internal Link Dist (ft)	320	436		218		663
Turn Bay Length (ft)			100		160	
Base Capacity (vph)	354	483	469	1380	768	1373
Starvation Cap Reductn	0	0	0	0	0	81
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.24	0.01	0.24	0.03	0.54

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	176	74	275	18	410	59	682
v/c Ratio	1.45	0.41	0.80	0.04	0.31	0.09	0.50
Control Delay (s/veh)	282.0	54.9	63.9	6.3	7.4	5.8	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	282.0	54.9	63.9	6.3	7.4	5.8	8.3
Queue Length 50th (ft)	~214	60	214	4	149	7	214
Queue Length 95th (ft)	#258	103	293	m13	197	m30	362
Internal Link Dist (ft)	611		323		663		99
Turn Bay Length (ft)		250		150		65	
Base Capacity (vph)	191	294	536	466	1339	684	1359
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.25	0.51	0.04	0.31	0.09	0.50

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	133	6	29	337	26	7	4	45	6	7	8
Future Vol, veh/h	17	133	6	29	337	26	7	4	45	6	7	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	90	90	90	71	71	71	66	66	66
Heavy Vehicles, %	0	2	0	0	2	8	0	0	0	17	0	13
Mvmt Flow	20	160	7	32	374	29	10	6	63	9	11	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	403	0	0	167	0	0	649	673	84	577	662	389
Stage 1	-	-	-	-	-	-	205	205	-	453	453	-
Stage 2	-	-	-	-	-	-	444	468	-	124	208	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.3	6.5	6.9	7.555	6.5	6.395
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.355	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.755	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.6615	4	3.4235
Pot Cap-1 Maneuver	1166	-	-	1423	-	-	372	379	965	387	385	630
Stage 1	-	-	-	-	-	-	784	736	-	551	573	-
Stage 2	-	-	-	-	-	-	597	565	-	829	733	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1166	-	-	1423	-	-	338	361	965	339	367	630
Mov Cap-2 Maneuver	-	-	-	-	-	-	338	361	-	339	367	-
Stage 1	-	-	-	-	-	-	769	722	-	535	556	-
Stage 2	-	-	-	-	-	-	557	548	-	755	720	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.99	0.56	10.66	14.16
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	714	370	-	-	131	-	-	425
HCM Lane V/C Ratio	0.11	0.018	-	-	0.023	-	-	0.075
HCM Ctrl Dly (s/v)	10.7	8.1	0.1	-	7.6	0	-	14.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0.2

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	109	141	244	217	27	151	1392	281	87	1471
v/c Ratio	0.50	0.59	0.86	0.79	0.08	0.71	0.47	0.27	0.36	0.75
Control Delay (s/veh)	53.0	72.8	79.9	86.4	0.5	38.7	21.3	2.6	9.4	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Total Delay (s/veh)	53.0	72.8	79.9	86.4	0.5	38.7	21.3	2.6	9.4	14.7
Queue Length 50th (ft)	89	137	218	222	0	58	307	0	13	292
Queue Length 95th (ft)	121	179	279	294	0	#190	382	46	m22	330
Internal Link Dist (ft)		427		923			629			156
Turn Bay Length (ft)			290			180		510		
Base Capacity (vph)	239	321	283	334	376	214	2954	1039	251	1954
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	176
Spillback Cap Reductn	0	0	0	0	1	0	71	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.44	0.86	0.65	0.07	0.71	0.48	0.27	0.35	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	490	602	224	57	379
v/c Ratio	0.33	0.39	0.36	0.09	0.78
Control Delay (s/veh)	17.0	16.7	28.5	2.0	44.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	17.0	16.7	28.5	2.0	44.6
Queue Length 50th (ft)	102	122	126	0	255
Queue Length 95th (ft)	172	191	159	12	268
Internal Link Dist (ft)	923	711	1158		1799
Turn Bay Length (ft)				140	
Base Capacity (vph)	1505	1545	696	672	668
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.39	0.32	0.08	0.57

Intersection Summary

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	7	497	8	4	661
Future Vol, veh/h	7	7	497	8	4	661
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	58	89	89	91	91
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	12	12	558	9	4	726

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1298	563	0	0	567	0
Stage 1	563	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	180	530	-	-	1015	-
Stage 1	574	-	-	-	-	-
Stage 2	478	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	179	530	-	-	1015	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	476	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.64	0	0.05
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	398	1015	-
HCM Lane V/C Ratio	-	-	0.061	0.004	-
HCM Ctrl Dly (s/v)	-	-	14.6	8.6	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	2	8	50	12	6
Future Vol, veh/h	11	2	8	50	12	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	20	0	0	4	9	0
Mvmt Flow	12	2	9	54	13	7

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	63	0	-	0	62	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	26	-
Critical Hdwy	4.3	-	-	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	2.38	-	-	-	3.581	3.3
Pot Cap-1 Maneuver	1432	-	-	-	927	1043
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	979	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1432	-	-	-	919	1043
Mov Cap-2 Maneuver	-	-	-	-	919	-
Stage 1	-	-	-	-	961	-
Stage 2	-	-	-	-	979	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	6.38	0	8.84
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1431	-	-	-	957
HCM Lane V/C Ratio	0.008	-	-	-	0.02
HCM Ctrl Dly (s/v)	7.5	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	5.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	12	2	11	39	1
Future Vol, veh/h	2	12	2	11	39	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	9	0	0	5	0
Mvmt Flow	2	13	2	12	42	1

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	15	0	25	9
Stage 1	-	-	-	-	9	-
Stage 2	-	-	-	-	16	-
Critical Hdwy	-	-	4.1	-	6.45	6.2
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.2	-	3.545	3.3
Pot Cap-1 Maneuver	-	-	1616	-	983	1079
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1616	-	982	1079
Mov Cap-2 Maneuver	-	-	-	-	982	-
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	997	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.11	8.83
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	984	-	-	277	-
HCM Lane V/C Ratio	0.044	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.8	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	37	459	84	60	621
Future Vol, veh/h	51	37	459	84	60	621
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	94	94	96	96
Heavy Vehicles, %	0	0	2	0	2	1
Mvmt Flow	56	41	488	89	63	647

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1305	533	0	0	578	0
Stage 1	533	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	178	551	-	-	996	-
Stage 1	593	-	-	-	-	-
Stage 2	459	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	167	551	-	-	996	-
Mov Cap-2 Maneuver	301	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	431	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	18.04	0	0.78
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	372	996	-
HCM Lane V/C Ratio	-	-	0.26	0.063	-
HCM Ctrl Dly (s/v)	-	-	18	8.9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1	0.2	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	147	8	9	45	9	51
Future Vol, veh/h	147	8	9	45	9	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	81	81	76	76
Heavy Vehicles, %	1	0	11	0	0	2
Mvmt Flow	175	10	11	56	12	67

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	185	0	258	180
Stage 1	-	-	-	-	180	-
Stage 2	-	-	-	-	78	-
Critical Hdwy	-	-	4.21	-	6.4	6.22
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.299	-	3.5	3.318
Pot Cap-1 Maneuver	-	-	1338	-	736	863
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	950	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1338	-	729	863
Mov Cap-2 Maneuver	-	-	-	-	729	-
Stage 1	-	-	-	-	856	-
Stage 2	-	-	-	-	942	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.29	9.73
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	840	-	-	300	-
HCM Lane V/C Ratio	0.094	-	-	0.008	-
HCM Ctrl Dly (s/v)	9.7	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	124	103	63	1722	33	1677
v/c Ratio	0.83	0.36	0.52	0.72	0.18	0.62
Control Delay (s/veh)	111.1	28.9	36.7	10.8	4.7	4.0
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.1
Total Delay (s/veh)	111.1	28.9	36.7	10.9	4.7	4.1
Queue Length 50th (ft)	130	38	8	289	4	151
Queue Length 95th (ft)	#190	74	24	301	m7	181
Internal Link Dist (ft)		542	127	204		1084
Turn Bay Length (ft)	100				250	
Base Capacity (vph)	154	337	141	2407	289	2725
Starvation Cap Reductn	0	0	0	58	0	205
Spillback Cap Reductn	0	0	0	0	0	20
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.31	0.45	0.73	0.11	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	67	283	287	39	555	210	649
v/c Ratio	0.50	0.85	0.54	0.11	0.61	0.50	0.55
Control Delay (s/veh)	70.8	78.2	9.1	18.9	27.6	13.0	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	70.8	78.2	9.1	18.9	27.6	13.0	6.8
Queue Length 50th (ft)	56	247	0	18	455	24	79
Queue Length 95th (ft)	100	#369	78	m37	m597	55	146
Internal Link Dist (ft)	176	1200			943		635
Turn Bay Length (ft)				150			
Base Capacity (vph)	181	371	558	365	915	447	1171
Starvation Cap Reductn	0	0	0	0	0	0	90
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.76	0.51	0.11	0.61	0.47	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	85	338	238	462	82	1383	11	1252
v/c Ratio	0.43	0.73	0.76	0.84	0.63	1.02	0.23	0.78
Control Delay (s/veh)	37.4	64.0	53.9	17.0	43.4	67.9	12.1	17.2
Queue Delay	0.0	7.1	61.6	53.9	0.0	33.1	12.4	51.6
Total Delay (s/veh)	37.4	71.1	115.6	70.9	43.4	101.0	24.6	68.8
Queue Length 50th (ft)	56	321	129	80	43	~697	1	586
Queue Length 95th (ft)	86	386	m64	m61	m77	#929	m0	m227
Internal Link Dist (ft)		1200		85		1084		263
Turn Bay Length (ft)					400		75	
Base Capacity (vph)	315	463	323	551	131	1362	47	1595
Starvation Cap Reductn	0	0	132	218	0	0	0	947
Spillback Cap Reductn	0	86	0	0	0	393	22	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.90	1.25	1.39	0.63	1.43	0.44	1.93

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	396	32	780	324	47	33	181
v/c Ratio	1.49	0.27	1.44	0.51	0.07	0.07	0.21
Control Delay (s/veh)	261.8	52.2	246.5	40.7	0.2	3.1	5.7
Queue Delay	0.0	0.0	0.8	29.0	0.0	0.0	4.9
Total Delay (s/veh)	261.8	52.2	247.3	69.7	0.2	3.1	10.6
Queue Length 50th (ft)	~575	26	~1104	258	0	1	6
Queue Length 95th (ft)	m#668	63	#1408	273	0	m1	m5
Internal Link Dist (ft)	85		930	1799			294
Turn Bay Length (ft)		150			120		
Base Capacity (vph)	265	117	543	641	678	492	858
Starvation Cap Reductn	0	0	0	0	0	0	604
Spillback Cap Reductn	0	0	53	320	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.49	0.27	1.59	1.01	0.07	0.07	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	328	1396	183	1217
v/c Ratio	0.30	1.02	1.13	2.15
Control Delay (s/veh)	3.7	35.6	171.0	545.4
Queue Delay	0.0	21.6	0.0	4.0
Total Delay (s/veh)	3.7	57.2	171.0	549.4
Queue Length 50th (ft)	27	~197	~241	~984
Queue Length 95th (ft)	m9	m#157	#418	#1114
Internal Link Dist (ft)		263		880
Turn Bay Length (ft)			130	
Base Capacity (vph)	1092	1371	162	565
Starvation Cap Reductn	0	75	0	0
Spillback Cap Reductn	0	0	0	202
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.30	1.08	1.13	3.35

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	301	267	22	268	482	591	272
v/c Ratio	0.86	0.45	0.05	0.61	0.39	0.60	0.30
Control Delay (s/veh)	72.7	6.7	25.1	21.9	13.1	23.2	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay (s/veh)	72.7	6.7	25.1	21.9	13.4	23.2	4.6
Queue Length 50th (ft)	260	1	9	83	115	413	29
Queue Length 95th (ft)	335	54	30	189	289	m596	m51
Internal Link Dist (ft)		576	380		635	903	
Turn Bay Length (ft)	175			330			175
Base Capacity (vph)	429	666	510	458	1222	981	910
Starvation Cap Reductn	0	0	0	0	268	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.40	0.04	0.59	0.51	0.60	0.30

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	473	737	200	616
v/c Ratio	0.94	0.82	0.68	0.52
Control Delay (s/veh)	73.5	44.9	25.8	16.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	73.5	44.9	25.8	16.8
Queue Length 50th (ft)	393	572	75	307
Queue Length 95th (ft)	#595	#794	102	347
Internal Link Dist (ft)	639	903		1234
Turn Bay Length (ft)			125	
Base Capacity (vph)	530	897	327	1174
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.89	0.82	0.61	0.52

Intersection Summary

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

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	209	59	4	282	39	280
v/c Ratio	0.74	0.16	0.01	0.22	0.05	0.22
Control Delay (s/veh)	58.9	33.0	7.8	7.9	7.7	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.9	33.0	7.8	7.9	7.7	7.4
Queue Length 50th (ft)	152	33	1	70	6	51
Queue Length 95th (ft)	216	49	6	136	m22	104
Internal Link Dist (ft)	320	436		218		663
Turn Bay Length (ft)			100		160	
Base Capacity (vph)	614	793	771	1290	769	1260
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.07	0.01	0.22	0.05	0.22

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	214	35	262	15	473	116	249
v/c Ratio	1.34	0.22	0.75	0.02	0.38	0.20	0.20
Control Delay (s/veh)	224.9	41.9	48.4	7.3	10.6	6.1	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	224.9	41.9	48.4	7.3	10.6	6.1	5.1
Queue Length 50th (ft)	~212	23	151	4	213	15	31
Queue Length 95th (ft)	#291	44	190	m13	327	51	83
Internal Link Dist (ft)	611		323		663		99
Turn Bay Length (ft)		250		150		65	
Base Capacity (vph)	287	295	589	819	1244	571	1255
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.12	0.44	0.02	0.38	0.20	0.20

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	272	11	18	240	48	6	4	69	28	5	3
Future Vol, veh/h	23	272	11	18	240	48	6	4	69	28	5	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	88	88	88	86	86	86	46	46	46
Heavy Vehicles, %	9	6	0	12	8	8	0	0	2	33	0	0
Mvmt Flow	28	336	14	20	273	55	7	5	80	61	11	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	327	0	0	349	0	0	718	768	175	568	747	300
Stage 1	-	-	-	-	-	-	399	399	-	341	341	-
Stage 2	-	-	-	-	-	-	319	368	-	227	406	-
Critical Hdwy	4.235	-	-	4.28	-	-	7.3	6.5	6.93	7.795	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.595	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.995	5.5	-
Follow-up Hdwy	2.2855	-	-	2.314	-	-	3.5	4	3.319	3.8135	4	3.3
Pot Cap-1 Maneuver	1187	-	-	1147	-	-	333	335	839	367	344	744
Stage 1	-	-	-	-	-	-	603	605	-	602	642	-
Stage 2	-	-	-	-	-	-	697	625	-	683	601	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1187	-	-	1147	-	-	304	319	839	312	327	744
Mov Cap-2 Maneuver	-	-	-	-	-	-	304	319	-	312	327	-
Stage 1	-	-	-	-	-	-	587	589	-	589	628	-
Stage 2	-	-	-	-	-	-	664	611	-	597	585	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.77	0.48	11.02	19.27
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	690	257	-	-	102	-	-	330
HCM Lane V/C Ratio	0.133	0.024	-	-	0.018	-	-	0.237
HCM Ctrl Dly (s/v)	11	8.1	0.2	-	8.2	0	-	19.3
HCM Lane LOS	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.1	-	-	0.9

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	146	279	93	163	38	73	1055	401	139	1082
v/c Ratio	0.47	0.83	0.49	0.62	0.09	0.30	0.42	0.40	0.43	0.58
Control Delay (s/veh)	41.7	73.3	44.3	65.8	0.4	15.7	24.0	3.5	14.0	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay (s/veh)	41.7	73.3	44.3	65.8	0.4	15.7	24.0	3.5	14.0	15.4
Queue Length 50th (ft)	101	243	63	140	0	26	219	0	26	205
Queue Length 95th (ft)	150	331	102	215	0	54	298	62	57	274
Internal Link Dist (ft)		427		923			629			156
Turn Bay Length (ft)			290			180		510		
Base Capacity (vph)	406	423	193	270	428	254	2492	991	427	1856
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	213
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.66	0.48	0.60	0.09	0.29	0.42	0.40	0.33	0.66

Intersection Summary

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	815	448	55	24	290
v/c Ratio	0.44	0.25	0.12	0.05	0.71
Control Delay (s/veh)	14.9	12.2	28.2	0.2	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.9	12.2	28.2	0.2	45.7
Queue Length 50th (ft)	166	75	31	0	196
Queue Length 95th (ft)	271	107	55	0	256
Internal Link Dist (ft)	923	711	1158		1799
Turn Bay Length (ft)				140	
Base Capacity (vph)	1864	1806	508	590	600
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.44	0.25	0.11	0.04	0.48

Intersection Summary

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	24	24	475	27	22	291
Future Vol, veh/h	24	24	475	27	22	291
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	93	93	91	91
Heavy Vehicles, %	20	25	6	25	20	7
Mvmt Flow	32	32	511	29	24	320

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	893	525	0	0	540	0
Stage 1	525	-	-	-	-	-
Stage 2	368	-	-	-	-	-
Critical Hdwy	6.6	6.45	-	-	4.3	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.525	-	-	2.38	-
Pot Cap-1 Maneuver	290	510	-	-	944	-
Stage 1	558	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	283	510	-	-	944	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	558	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.35	0	0.63
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	449	944	-
HCM Lane V/C Ratio	-	-	0.143	0.026	-
HCM Ctrl Dly (s/v)	-	-	14.3	8.9	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	13	7	53	17	18
Future Vol, veh/h	18	13	7	53	17	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	25	14	7	22	0
Mvmt Flow	20	14	8	58	18	20

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	65	0	-	0	90	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	53	-
Critical Hdwy	4.1	-	-	-	6.62	6.2
Critical Hdwy Stg 1	-	-	-	-	5.62	-
Critical Hdwy Stg 2	-	-	-	-	5.62	-
Follow-up Hdwy	2.2	-	-	-	3.698	3.3
Pot Cap-1 Maneuver	1550	-	-	-	864	1042
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	921	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1550	-	-	-	853	1042
Mov Cap-2 Maneuver	-	-	-	-	853	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	921	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	4.27	0	8.99
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1045	-	-	-	941
HCM Lane V/C Ratio	0.013	-	-	-	0.04
HCM Ctrl Dly (s/v)	7.4	0	-	-	9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	5.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	21	3	4	56	4
Future Vol, veh/h	9	21	3	4	56	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	17	0	0	9	0
Mvmt Flow	10	23	3	4	61	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	33	0	32	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	11	-
Critical Hdwy	-	-	4.1	-	6.49	6.2
Critical Hdwy Stg 1	-	-	-	-	5.49	-
Critical Hdwy Stg 2	-	-	-	-	5.49	-
Follow-up Hdwy	-	-	2.2	-	3.581	3.3
Pot Cap-1 Maneuver	-	-	1592	-	964	1062
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	994	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1592	-	962	1062
Mov Cap-2 Maneuver	-	-	-	-	962	-
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	992	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.11	8.99
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	968	-	-	771	-
HCM Lane V/C Ratio	0.067	-	-	0.002	-
HCM Ctrl Dly (s/v)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	29	437	99	48	300
Future Vol, veh/h	19	29	437	99	48	300
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	95	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	95	95	88	88
Heavy Vehicles, %	6	11	8	2	0	7
Mvmt Flow	25	38	460	104	55	341

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	962	512	0	0	564	0
Stage 1	512	-	-	-	-	-
Stage 2	450	-	-	-	-	-
Critical Hdwy	6.46	6.31	-	-	4.1	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.399	-	-	2.2	-
Pot Cap-1 Maneuver	279	544	-	-	1018	-
Stage 1	594	-	-	-	-	-
Stage 2	634	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	264	544	-	-	1018	-
Mov Cap-2 Maneuver	393	-	-	-	-	-
Stage 1	594	-	-	-	-	-
Stage 2	600	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	13.78	0	1.21
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	472	1018	-
HCM Lane V/C Ratio	-	-	0.132	0.054	-
HCM Ctrl Dly (s/v)	-	-	13.8	8.7	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.5	0.2	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	126	12	23	26	17	55
Future Vol, veh/h	126	12	23	26	17	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	55	55	69	69
Heavy Vehicles, %	1	0	29	8	0	11
Mvmt Flow	158	15	42	47	25	80

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	173	0	296	165
Stage 1	-	-	-	-	165	-
Stage 2	-	-	-	-	131	-
Critical Hdwy	-	-	4.39	-	6.4	6.31
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.461	-	3.5	3.399
Pot Cap-1 Maneuver	-	-	1257	-	699	857
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	900	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1257	-	676	857
Mov Cap-2 Maneuver	-	-	-	-	676	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	869	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	3.74	10.13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	806	-	-	845	-
HCM Lane V/C Ratio	0.13	-	-	0.033	-
HCM Ctrl Dly (s/v)	10.1	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Lane Group	EBL	EBT	WBT	NBT	SBL	SBT
Lane Group Flow (vph)	85	76	17	1237	30	1315
v/c Ratio	0.59	0.27	0.09	0.50	0.09	0.47
Control Delay (s/veh)	78.5	5.6	1.1	7.9	3.4	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	78.5	5.6	1.1	7.9	3.4	3.1
Queue Length 50th (ft)	76	0	0	142	3	64
Queue Length 95th (ft)	117	9	0	174	m6	121
Internal Link Dist (ft)		542	127	204		1084
Turn Bay Length (ft)	100				250	
Base Capacity (vph)	173	419	219	2465	427	2770
Starvation Cap Reductn	0	0	0	115	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.18	0.08	0.53	0.07	0.47

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	162	215	14	499	238	425
v/c Ratio	0.36	0.71	0.56	0.04	0.56	0.48	0.36
Control Delay (s/veh)	58.1	66.4	12.0	15.5	22.3	10.6	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	58.1	66.4	12.0	15.5	22.3	10.6	5.4
Queue Length 50th (ft)	30	121	0	5	329	35	64
Queue Length 95th (ft)	51	187	63	m14	479	54	90
Internal Link Dist (ft)	176	1200			943		635
Turn Bay Length (ft)				150			
Base Capacity (vph)	196	279	419	381	885	530	1190
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.58	0.51	0.04	0.56	0.45	0.36

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	81	435	181	347	63	1190	4	1016
v/c Ratio	0.27	0.87	0.70	0.62	0.37	0.94	0.07	0.68
Control Delay (s/veh)	27.4	67.1	62.9	11.1	31.9	52.2	7.0	11.6
Queue Delay	0.0	17.0	43.6	13.3	0.0	44.7	0.0	51.0
Total Delay (s/veh)	27.4	84.1	106.5	24.4	31.9	96.9	7.0	62.6
Queue Length 50th (ft)	44	377	103	43	27	340	0	344
Queue Length 95th (ft)	76	#554	m113	m47	73	#671	m0	m16
Internal Link Dist (ft)		1200		85		1084		263
Turn Bay Length (ft)					400		75	
Base Capacity (vph)	418	499	296	564	171	1270	55	1499
Starvation Cap Reductn	0	0	121	195	0	0	0	739
Spillback Cap Reductn	0	64	0	0	0	199	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	1.00	1.03	0.94	0.37	1.11	0.07	1.34

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBL	WBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	434	14	554	80	24	102	170
v/c Ratio	1.18	0.12	1.00	0.13	0.04	0.16	0.21
Control Delay (s/veh)	117.4	39.8	85.7	30.0	0.1	5.9	7.4
Queue Delay	0.0	0.0	34.2	0.5	0.0	0.0	0.0
Total Delay (s/veh)	117.4	39.8	120.0	30.5	0.1	5.9	7.4
Queue Length 50th (ft)	~468	9	503	48	0	5	10
Queue Length 95th (ft)	m#581	29	#751	87	0	m4	m6
Internal Link Dist (ft)	85		930	1799			294
Turn Bay Length (ft)		150			120		
Base Capacity (vph)	367	114	555	594	618	626	793
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	54	297	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	0.12	1.11	0.27	0.04	0.16	0.21

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	113	1162	220	1035
v/c Ratio	0.10	0.90	1.76	1.85
Control Delay (s/veh)	0.2	20.1	408.1	413.6
Queue Delay	0.0	4.5	0.0	1.6
Total Delay (s/veh)	0.2	24.6	408.1	415.3
Queue Length 50th (ft)	0	110	~326	~708
Queue Length 95th (ft)	m0	m122	#513	#928
Internal Link Dist (ft)		263		880
Turn Bay Length (ft)			130	
Base Capacity (vph)	1087	1289	125	558
Starvation Cap Reductn	0	84	0	0
Spillback Cap Reductn	0	0	0	101
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.10	0.96	1.76	2.26

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	340	315	8	252	326	310	250
v/c Ratio	0.82	0.45	0.02	0.44	0.30	0.40	0.31
Control Delay (s/veh)	53.8	4.9	18.5	26.2	24.8	23.8	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	53.8	4.9	18.5	26.2	24.8	23.8	3.7
Queue Length 50th (ft)	243	1	2	126	166	144	25
Queue Length 95th (ft)	314	57	10	237	297	323	m44
Internal Link Dist (ft)		576	380		635	903	
Turn Bay Length (ft)	175			330			175
Base Capacity (vph)	549	821	545	632	1090	770	803
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.38	0.01	0.40	0.30	0.40	0.31

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	269	658	275	375
v/c Ratio	0.84	0.67	0.62	0.29
Control Delay (s/veh)	65.4	38.0	13.1	7.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay (s/veh)	65.4	38.0	13.1	7.3
Queue Length 50th (ft)	187	445	68	98
Queue Length 95th (ft)	#284	635	104	144
Internal Link Dist (ft)	639	903		1234
Turn Bay Length (ft)			125	
Base Capacity (vph)	372	975	517	1304
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.72	0.67	0.53	0.29

Intersection Summary

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

APPENDIX F

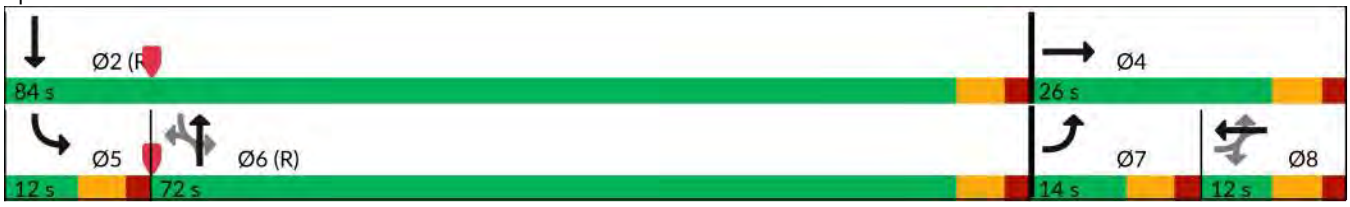
MITIGATION SYNCHRO REPORTS

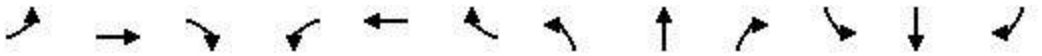
2025 EXISTING MITIGATION

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	56	0	2	0	2	1103	25	1037
Future Volume (vph)	56	0	2	0	2	1103	25	1037
Turn Type	D.P+P	NA	Perm	NA	Perm	NA	D.P+P	NA
Protected Phases	7	4		8		6	5	2
Permitted Phases	8		8		6		6	
Detector Phase	7	4	8	8	6	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	11.0	24.0	24.0	11.0	24.0
Total Split (s)	14.0	26.0	12.0	12.0	72.0	72.0	12.0	84.0
Total Split (%)	12.7%	23.6%	10.9%	10.9%	65.5%	65.5%	10.9%	76.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0		6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	9.8	12.1		5.5		82.1	84.6	89.4
Actuated g/C Ratio	0.09	0.11		0.05		0.75	0.77	0.81
v/c Ratio	0.45	0.22		0.08		0.47	0.07	0.43
Control Delay (s/veh)	52.3	1.7		0.6		9.3	4.5	5.0
Queue Delay	0.0	0.0		0.0		0.4	0.0	0.0
Total Delay (s/veh)	52.3	1.7		0.6		9.6	4.5	5.0
LOS	D	A		A		A	A	A
Approach Delay (s/veh)		28.3		0.6		9.6		4.9
Approach LOS		C		A		A		A

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBSB, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay (s/veh): 8.3	Intersection LOS: A
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Northside Dr & 11th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	0	50	2	0	7	2	1103	12	25	1037	47
Future Volume (veh/h)	56	0	50	2	0	7	2	1103	12	25	1037	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1811	1900	1900	1900	1900	1900	1841	1900	1900	1856	1767
Adj Flow Rate, veh/h	70	0	62	4	0	12	2	1137	12	28	1165	53
Peak Hour Factor	0.80	0.80	0.80	0.56	0.56	0.56	0.97	0.97	0.97	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	0	0	0	0	0	4	0	0	3	9
Cap, veh/h	213	0	223	51	6	49	33	2307	24	362	2560	116
Arrive On Green	0.05	0.00	0.15	0.04	0.00	0.04	0.66	0.66	0.66	0.03	0.75	0.75
Sat Flow, veh/h	1753	0	1535	249	148	1191	1	3469	37	1810	3434	156
Grp Volume(v), veh/h	70	0	62	16	0	0	603	0	548	28	598	620
Grp Sat Flow(s),veh/h/ln	1753	0	1535	1587	0	0	1838	0	1668	1810	1763	1827
Q Serve(g_s), s	4.2	0.0	4.0	0.0	0.0	0.0	0.0	0.0	18.0	0.5	14.4	14.4
Cycle Q Clear(g_c), s	4.2	0.0	4.0	1.0	0.0	0.0	18.0	0.0	18.0	0.5	14.4	14.4
Prop In Lane	1.00		1.00	0.25		0.75	0.00		0.02	1.00		0.09
Lane Grp Cap(c), veh/h	213	0	223	106	0	0	1255	0	1109	362	1314	1362
V/C Ratio(X)	0.33	0.00	0.28	0.15	0.00	0.00	0.48	0.00	0.49	0.08	0.45	0.46
Avail Cap(c_a), veh/h	253	0	279	127	0	0	1255	0	1109	413	1314	1362
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	47.4	0.0	41.9	51.0	0.0	0.0	9.2	0.0	9.2	6.9	5.4	5.4
Incr Delay (d2), s/veh	0.9	0.0	0.7	0.6	0.0	0.0	1.3	0.0	1.6	0.1	1.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.6	0.4	0.0	0.0	6.9	0.0	6.3	0.2	4.6	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.2	0.0	42.5	51.7	0.0	0.0	10.5	0.0	10.8	7.0	6.4	6.3
LnGrp LOS	D		D	D			B		B	A	A	A
Approach Vol, veh/h		132			16			1151			1246	
Approach Delay, s/veh		45.6			51.7			10.6			6.4	
Approach LOS		D			D			B			A	

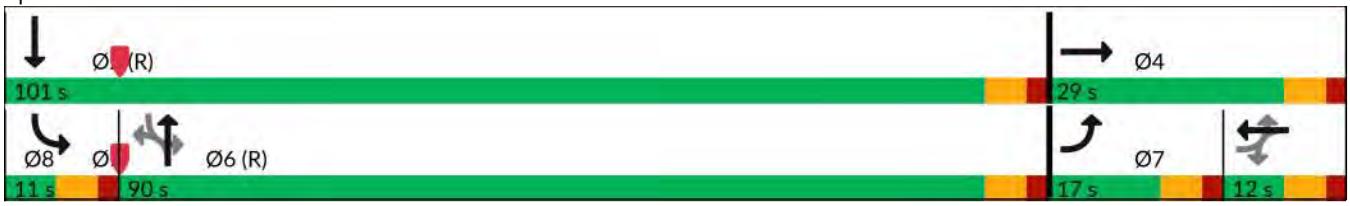
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		88.0		22.0	8.9	79.1	11.5	10.5				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		78.0		20.0	6.0	66.0	8.0	6.0				
Max Q Clear Time (g_c+I1), s		16.4		6.0	2.5	20.0	6.2	3.0				
Green Ext Time (p_c), s		10.9		0.2	0.0	9.7	0.0	0.0				

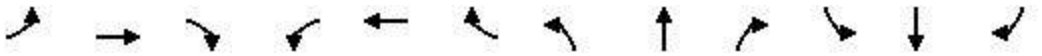
Intersection Summary	
HCM 7th Control Delay, s/veh	10.6
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	92	5	4	1	4	1414	27	1330
Future Volume (vph)	92	5	4	1	4	1414	27	1330
Turn Type	D.P+P	NA	Perm	NA	Perm	NA	D.P+P	NA
Protected Phases	7	4		8		6	5	2
Permitted Phases	8		8		6		6	
Detector Phase	7	4	8	8	6	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	11.0	24.0	24.0	11.0	24.0
Total Split (s)	17.0	29.0	12.0	12.0	90.0	90.0	11.0	101.0
Total Split (%)	13.1%	22.3%	9.2%	9.2%	69.2%	69.2%	8.5%	77.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0		6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	15.2	20.0		5.8		91.4	94.4	98.0
Actuated g/C Ratio	0.12	0.15		0.04		0.70	0.73	0.75
v/c Ratio	0.59	0.33		0.50		0.69	0.16	0.60
Control Delay (s/veh)	61.4	20.9		33.6		8.5	6.7	8.9
Queue Delay	0.0	0.0		0.0		0.3	0.0	0.1
Total Delay (s/veh)	61.4	20.9		33.6		8.7	6.7	9.0
LOS	E	C		C		A	A	A
Approach Delay (s/veh)		43.0		33.6		8.7		8.9
Approach LOS		D		C		A		A

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBSB, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay (s/veh): 11.3	Intersection LOS: B
Intersection Capacity Utilization 64.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Northside Dr & 11th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	5	72	4	1	32	4	1414	24	27	1330	58
Future Volume (veh/h)	92	5	72	4	1	32	4	1414	24	27	1330	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1856	1900	1900	1900	1530	1885	1900	1900	1870	1870
Adj Flow Rate, veh/h	118	6	92	6	2	52	5	1607	27	31	1529	67
Peak Hour Factor	0.78	0.78	0.78	0.62	0.62	0.62	0.88	0.88	0.88	0.87	0.87	0.87
Percent Heavy Veh, %	2	0	3	0	0	0	25	1	0	0	2	2
Cap, veh/h	257	17	258	35	5	64	30	2343	39	222	2562	112
Arrive On Green	0.08	0.17	0.17	0.05	0.05	0.05	0.67	0.67	0.67	0.03	0.74	0.74
Sat Flow, veh/h	1781	100	1526	97	117	1392	3	3515	59	1810	3468	152
Grp Volume(v), veh/h	118	0	98	60	0	0	858	0	781	31	781	815
Grp Sat Flow(s),veh/h/ln	1781	0	1625	1606	0	0	1872	0	1705	1810	1777	1843
Q Serve(g_s), s	8.1	0.0	6.9	2.5	0.0	0.0	0.0	0.0	36.6	0.7	26.6	26.9
Cycle Q Clear(g_c), s	8.1	0.0	6.9	4.8	0.0	0.0	36.2	0.0	36.6	0.7	26.6	26.9
Prop In Lane	1.00		0.94	0.10		0.87	0.01		0.03	1.00		0.08
Lane Grp Cap(c), veh/h	257	0	275	105	0	0	1276	0	1137	222	1313	1361
V/C Ratio(X)	0.46	0.00	0.36	0.57	0.00	0.00	0.67	0.00	0.69	0.14	0.60	0.60
Avail Cap(c_a), veh/h	271	0	288	105	0	0	1276	0	1137	245	1313	1361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	53.6	0.0	47.8	61.4	0.0	0.0	13.3	0.0	13.3	12.0	7.9	8.0
Incr Delay (d2), s/veh	1.3	0.0	0.8	7.4	0.0	0.0	2.8	0.0	3.4	0.2	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	2.9	2.2	0.0	0.0	15.1	0.0	14.0	0.3	9.3	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.8	0.0	48.5	68.8	0.0	0.0	16.1	0.0	16.7	12.2	9.2	9.2
LnGrp LOS	D		D	E			B		B	B	A	A
Approach Vol, veh/h		216			60			1639			1627	
Approach Delay, s/veh		52.0			68.8			16.4			9.3	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		102.0		28.0	9.4	92.7	16.0	12.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		95.0		23.0	5.0	84.0	11.0	6.0				
Max Q Clear Time (g_c+I1), s		28.9		8.9	2.7	38.6	10.1	6.8				
Green Ext Time (p_c), s		18.8		0.4	0.0	18.2	0.0	0.0				

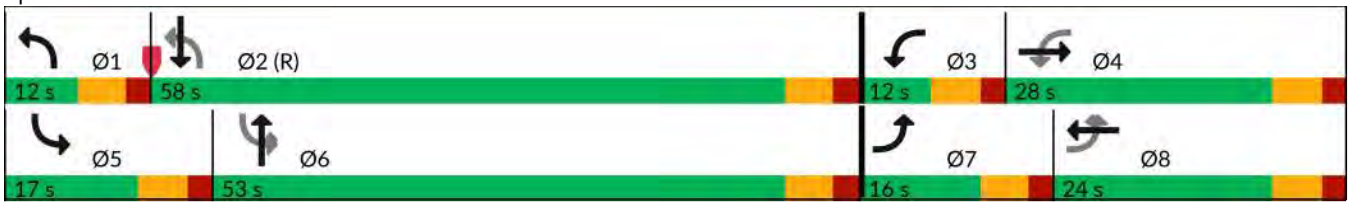
Intersection Summary												
HCM 7th Control Delay, s/veh			16.2									
HCM 7th LOS			B									

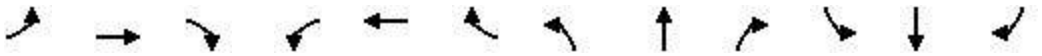
2030 NO-BUILD MITIGATION

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	117	212	89	117	36	46	992	377	135	977
Future Volume (vph)	117	212	89	117	36	46	992	377	135	977
Turn Type	D.P+P	NA	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA
Protected Phases	7	4	3	8		1	6		5	2
Permitted Phases	8		4		8	2		6	6	
Detector Phase	7	4	3	8	8	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	5.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Split (s)	11.0	22.0	11.0	22.0	22.0	11.0	22.0	22.0	11.0	22.0
Total Split (s)	16.0	28.0	12.0	24.0	24.0	12.0	53.0	53.0	17.0	58.0
Total Split (%)	14.5%	25.5%	10.9%	21.8%	21.8%	10.9%	48.2%	48.2%	15.5%	52.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	C-Max
Act Effct Green (s)	22.4	18.8	23.6	13.0	13.0	64.8	54.7	54.7	63.6	59.5
Actuated g/C Ratio	0.20	0.17	0.21	0.12	0.12	0.59	0.50	0.50	0.58	0.54
v/c Ratio	0.42	0.38	0.37	0.60	0.12	0.19	0.43	0.41	0.41	0.56
Control Delay (s/veh)	36.1	42.2	35.8	57.4	0.8	10.8	19.2	3.2	13.3	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	36.1	42.2	35.8	57.4	0.8	10.8	19.2	3.2	13.3	15.3
LOS	D	D	D	E	A	B	B	A	B	B
Approach Delay (s/veh)		40.1		41.0			14.7			15.1
Approach LOS		D		D			B			B

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay (s/veh): 19.5	Intersection LOS: B
Intersection Capacity Utilization 65.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: Northside Dr & 10th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	212	4	89	117	36	46	992	377	135	977	50
Future Volume (veh/h)	117	212	4	89	117	36	46	992	377	135	977	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1159	1737	1767	1900	1693	1841	1870	1870	1856	1841
Adj Flow Rate, veh/h	119	216	4	93	122	38	49	1055	0	139	1007	52
Peak Hour Factor	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.97	0.97	0.97
Percent Heavy Veh, %	4	5	50	11	9	0	14	4	2	2	3	4
Cap, veh/h	227	390	7	213	158	144	317	2834		397	1978	102
Arrive On Green	0.08	0.11	0.11	0.05	0.09	0.09	0.04	0.56	0.00	0.05	0.58	0.58
Sat Flow, veh/h	1753	3485	64	1654	1767	1610	1612	5025	1585	1781	3411	176
Grp Volume(v), veh/h	119	107	113	93	122	38	49	1055	0	139	520	539
Grp Sat Flow(s),veh/h/ln	1753	1735	1814	1654	1767	1610	1612	1675	1585	1781	1763	1824
Q Serve(g_s), s	6.7	6.4	6.5	5.5	7.4	2.4	1.3	12.7	0.0	3.6	19.4	19.4
Cycle Q Clear(g_c), s	6.7	6.4	6.5	5.5	7.4	2.4	1.3	12.7	0.0	3.6	19.4	19.4
Prop In Lane	1.00		0.04	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	227	194	203	213	158	144	317	2834		397	1022	1058
V/C Ratio(X)	0.52	0.55	0.55	0.44	0.77	0.26	0.15	0.37		0.35	0.51	0.51
Avail Cap(c_a), veh/h	251	347	363	213	289	263	348	2834		483	1022	1058
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.3	46.2	46.2	40.7	49.0	46.7	10.3	13.2	0.0	9.8	13.8	13.8
Incr Delay (d2), s/veh	1.9	2.4	2.4	1.4	7.6	0.9	0.2	0.1	0.0	0.5	1.8	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	2.9	3.0	2.3	3.6	1.0	0.5	4.6	0.0	1.4	7.7	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.1	48.7	48.6	42.1	56.6	47.7	10.5	13.3	0.0	10.4	15.6	15.5
LnGrp LOS	D	D	D	D	E	D	B	B		B	B	B
Approach Vol, veh/h		339			253			1104			1198	
Approach Delay, s/veh		46.7			49.9			13.2			14.9	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	69.8	12.0	18.3	11.6	68.0	14.5	15.8
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	6.0	52.0	6.0	22.0	11.0	47.0	10.0	18.0
Max Q Clear Time (g_c+I1), s	3.3	21.4	7.5	8.5	5.6	14.7	8.7	9.4
Green Ext Time (p_c), s	0.0	7.9	0.0	0.9	0.1	8.7	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	21.1
HCM 7th LOS	C

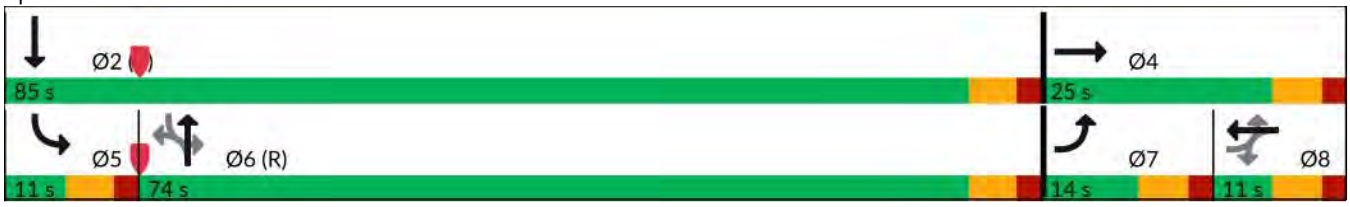
Notes

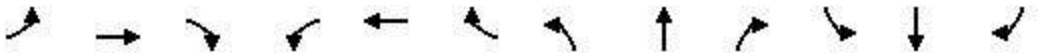
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	59	0	2	0	2	1159	27	1090
Future Volume (vph)	59	0	2	0	2	1159	27	1090
Turn Type	D.P+P	NA	Perm	NA	Perm	NA	D.P+P	NA
Protected Phases	7	4		8		6	5	2
Permitted Phases	8		8		6		6	
Detector Phase	7	4	8	8	6	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	11.0	24.0	24.0	11.0	24.0
Total Split (s)	14.0	25.0	11.0	11.0	74.0	74.0	11.0	85.0
Total Split (%)	12.7%	22.7%	10.0%	10.0%	67.3%	67.3%	10.0%	77.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0		6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	9.6	11.9		5.1		82.8	84.8	89.6
Actuated g/C Ratio	0.09	0.11		0.05		0.75	0.77	0.81
v/c Ratio	0.48	0.24		0.08		0.49	0.09	0.45
Control Delay (s/veh)	54.2	3.4		0.7		6.2	4.4	5.0
Queue Delay	0.0	0.0		0.0		0.1	0.0	0.0
Total Delay (s/veh)	54.2	3.4		0.7		6.2	4.4	5.0
LOS	D	A		A		A	A	A
Approach Delay (s/veh)		30.2		0.7		6.2		5.0
Approach LOS		C		A		A		A

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBSB, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay (s/veh): 6.9	Intersection LOS: A
Intersection Capacity Utilization 53.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Northside Dr & 11th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	0	53	2	0	7	2	1159	13	27	1090	49
Future Volume (veh/h)	59	0	53	2	0	7	2	1159	13	27	1090	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1811	1900	1900	1900	1900	1900	1841	1900	1900	1856	1767
Adj Flow Rate, veh/h	74	0	66	4	0	12	2	1195	13	30	1225	55
Peak Hour Factor	0.80	0.80	0.80	0.56	0.56	0.56	0.97	0.97	0.97	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	0	0	0	0	0	4	0	0	3	9
Cap, veh/h	218	0	228	51	6	50	33	2291	25	341	2551	114
Arrive On Green	0.05	0.00	0.15	0.04	0.00	0.04	0.66	0.66	0.66	0.03	0.74	0.74
Sat Flow, veh/h	1753	0	1535	246	150	1190	1	3468	38	1810	3436	154
Grp Volume(v), veh/h	74	0	66	16	0	0	634	0	576	30	628	652
Grp Sat Flow(s),veh/h/ln	1753	0	1535	1587	0	0	1838	0	1668	1810	1763	1828
Q Serve(g_s), s	4.4	0.0	4.2	0.0	0.0	0.0	0.0	0.0	19.7	0.6	15.7	15.7
Cycle Q Clear(g_c), s	4.4	0.0	4.2	1.0	0.0	0.0	19.6	0.0	19.7	0.6	15.7	15.7
Prop In Lane	1.00		1.00	0.25		0.75	0.00		0.02	1.00		0.08
Lane Grp Cap(c), veh/h	218	0	228	107	0	0	1247	0	1102	341	1309	1357
V/C Ratio(X)	0.34	0.00	0.29	0.15	0.00	0.00	0.51	0.00	0.52	0.09	0.48	0.48
Avail Cap(c_a), veh/h	254	0	265	113	0	0	1247	0	1102	374	1309	1357
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	47.1	0.0	41.7	51.0	0.0	0.0	9.7	0.0	9.7	7.3	5.7	5.7
Incr Delay (d2), s/veh	0.9	0.0	0.7	0.6	0.0	0.0	1.5	0.0	1.8	0.1	1.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.7	0.4	0.0	0.0	7.5	0.0	6.9	0.2	5.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.1	0.0	42.4	51.6	0.0	0.0	11.2	0.0	11.4	7.4	6.7	6.7
LnGrp LOS	D		D	D			B		B	A	A	A
Approach Vol, veh/h		140			16			1210			1310	
Approach Delay, s/veh		45.4			51.6			11.3			6.7	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		87.7		22.3	9.0	78.7	11.7	10.6				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		79.0		19.0	5.0	68.0	8.0	5.0				
Max Q Clear Time (g_c+I1), s		17.7		6.2	2.6	21.7	6.4	3.0				
Green Ext Time (p_c), s		12.0		0.2	0.0	10.5	0.0	0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			11.1									
HCM 7th LOS			B									

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

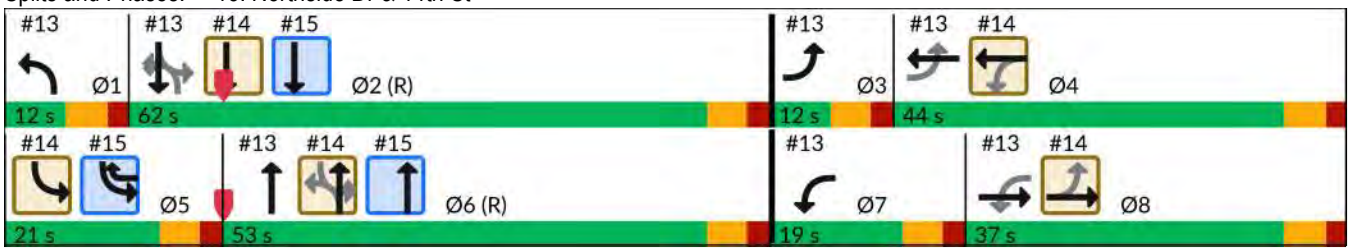
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	43	368	468	629
Demand Flow Rate, veh/h	48	388	507	666
Vehicles Circulating, veh/h	764	390	295	177
Vehicles Exiting, veh/h	47	412	517	601
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.2	9.1	10.0	9.7
Approach LOS	A	A	B	A

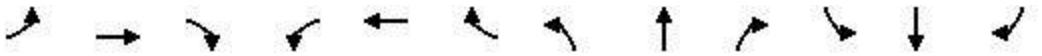
Lane	Left	Left	Left	Left	Bypass
Designated Moves	LTR	LTR	LTR	LT	R
Assumed Moves	LTR	LTR	LTR	LT	
RT Channelized					Yield
Lane Util	1.000	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	48	388	507	634	32
Cap Entry Lane, veh/h	633	927	1021	1152	1315
Entry HV Adj Factor	0.904	0.948	0.923	0.944	0.962
Flow Entry, veh/h	43	368	468	598	31
Cap Entry, veh/h	572	879	943	1087	1265
V/C Ratio	0.076	0.419	0.496	0.550	0.025
Control Delay, s/veh	7.2	9.1	10.0	10.0	3.0
LOS	A	A	B	B	A
95th %tile Queue, veh	0	2	3	3	0

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	Ø5
Lane Configurations										
Traffic Volume (vph)	70	312	157	303	57	968	4	869	53	
Future Volume (vph)	70	312	157	303	57	968	4	869	53	
Turn Type	D.P+P	NA	D.P+P	NA	D.P+P	NA	Perm	NA	Perm	
Protected Phases	3	8	7	4	1	6		2		5
Permitted Phases	4		8		2		2		2	
Detector Phase	3	8	7	4	1	6	2	2	2	
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	24.0	24.0	24.0	11.0
Total Split (s)	12.0	37.0	19.0	44.0	12.0	53.0	62.0	62.0	62.0	21.0
Total Split (%)	9.2%	28.5%	14.6%	33.8%	9.2%	40.8%	47.7%	47.7%	47.7%	16%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	37.1	24.6	37.1	31.1	70.1	55.0	64.4	64.4	64.4	
Actuated g/C Ratio	0.29	0.19	0.29	0.24	0.54	0.42	0.50	0.50	0.50	
v/c Ratio	0.44	0.64	0.63	0.77	0.23	0.55	0.03	0.54	0.07	
Control Delay (s/veh)	37.1	50.9	45.4	16.5	16.0	30.5	4.3	4.5	0.1	
Queue Delay	0.0	0.0	14.6	0.1	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.1	50.9	59.9	16.6	16.0	30.5	4.3	4.5	0.1	
LOS	D	D	E	B	B	C	A	A	A	
Approach Delay (s/veh)		48.7		31.3		29.7		4.3		
Approach LOS		D		C		C		A		

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay (s/veh): 25.1	Intersection LOS: C
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: Northside Dr & 14th St





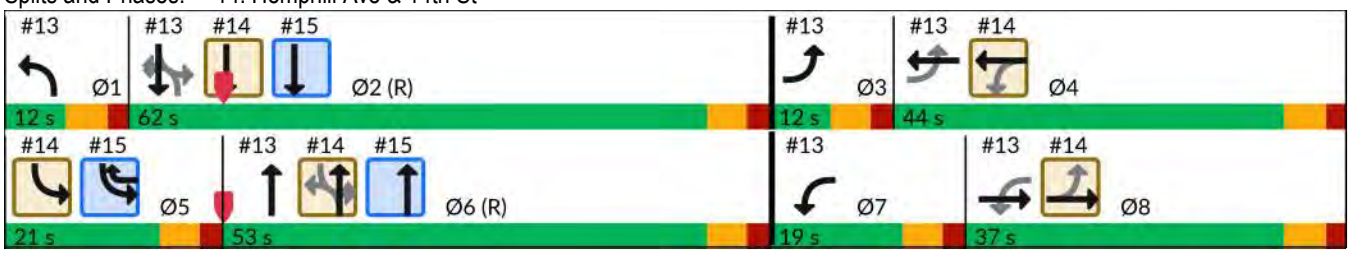
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	312	53	157	303	5	57	968	68	4	869	53
Future Volume (vph)	70	312	53	157	303	5	57	968	68	4	869	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1671	3452		1719	1824		1703	4907		1805	3505	1583
Flt Permitted	0.26	1.00		0.32	1.00		0.21	1.00		0.14	1.00	1.00
Satd. Flow (perm)	449	3452		580	1824		383	4907		268	3505	1583
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.90	0.90	0.90	0.93	0.93	0.93
Adj. Flow (vph)	81	363	62	173	333	5	63	1076	76	4	934	57
RTOR Reduction (vph)	0	11	0	0	1	0	0	6	0	0	0	29
Lane Group Flow (vph)	81	414	0	173	337	0	63	1146	0	4	934	28
Heavy Vehicles (%)	8%	2%	4%	5%	4%	0%	6%	4%	14%	0%	3%	2%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		Perm	NA	Perm
Protected Phases	3	8		7	4		1	6			2	
Permitted Phases	4			8			2			2		2
Actuated Green, G (s)	37.1	24.6		37.1	31.1		68.9	55.0		63.2	63.2	63.2
Effective Green, g (s)	37.1	24.6		37.1	31.1		68.9	55.0		63.2	63.2	63.2
Actuated g/C Ratio	0.29	0.19		0.29	0.24		0.53	0.42		0.49	0.49	0.49
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	184	653		275	436		260	2076		130	1703	769
v/s Ratio Prot	0.02	0.12		c0.06	c0.18		c0.01	0.23			c0.27	
v/s Ratio Perm	0.11			0.12			0.12			0.01		0.02
v/c Ratio	0.44	0.63		0.63	0.77		0.24	0.55		0.03	0.55	0.04
Uniform Delay, d1	36.1	48.5		37.3	46.2		16.5	28.2		17.4	23.4	17.5
Progression Factor	1.00	1.00		1.16	0.13		1.00	1.00		0.18	0.14	1.00
Incremental Delay, d2	1.7	2.0		3.6	6.9		0.5	1.1		0.4	1.1	0.1
Delay (s)	37.8	50.6		46.9	13.1		17.0	29.3		3.6	4.4	17.5
Level of Service	D	D		D	B		B	C		A	A	B
Approach Delay (s/veh)		48.5			24.5			28.7			5.1	
Approach LOS		D			C			C			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	Ø1	Ø3	Ø7
Lane Configurations												
Traffic Volume (vph)	5	307	12	433	30	42	22	86	143			
Future Volume (vph)	5	307	12	433	30	42	22	86	143			
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	D.P+P	NA			
Protected Phases		8		4		6		5	2	1	3	7
Permitted Phases	8		4		6		6	6				
Detector Phase	8	8	4	4	6	6	6	5	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	11.0	11.0
Total Split (s)	37.0	37.0	44.0	44.0	53.0	53.0	53.0	21.0	62.0	12.0	12.0	19.0
Total Split (%)	28.5%	28.5%	33.8%	33.8%	40.8%	40.8%	40.8%	16.2%	47.7%	9%	9%	15%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0			
Total Lost Time (s)		6.0		6.0		6.0	6.0	6.0	6.0			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	None	None	None
Act Effct Green (s)		24.6		31.1		55.0	55.0	68.9	64.4			
Actuated g/C Ratio		0.19		0.24		0.42	0.42	0.53	0.50			
v/c Ratio		0.67		0.76		0.12	0.03	0.14	0.19			
Control Delay (s/veh)		16.3		51.9		26.0	0.1	3.2	8.5			
Queue Delay		0.3		0.2		0.0	0.0	0.0	0.0			
Total Delay (s/veh)		16.6		52.1		26.0	0.1	3.2	8.5			
LOS		B		D		C	A	A	A			
Approach Delay (s/veh)		16.6		52.1		20.1			6.5			
Approach LOS		B		D		C			A			

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay (s/veh): 29.4	Intersection LOS: C
Intersection Capacity Utilization 48.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Hemphill Ave & 14th St



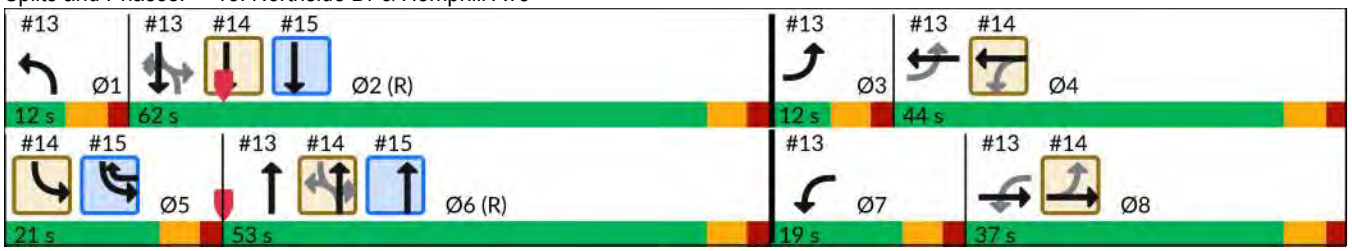
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	307	75	12	433	33	30	42	22	86	143	0
Future Volume (vph)	5	307	75	12	433	33	30	42	22	86	143	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frt		0.97			0.99			1.00	0.85	1.00	1.00	
Flt Protected		1.00			1.00			0.98	1.00	0.95	1.00	
Satd. Flow (prot)		3369			3390			1862	1468	1770	1845	
Flt Permitted		0.95			0.89			0.85	1.00	0.70	1.00	
Satd. Flow (perm)		3190			3023			1610	1468	1313	1845	
Peak-hour factor, PHF	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90	0.84	0.84	0.84
Adj. Flow (vph)	5	330	81	14	498	38	33	47	24	102	170	0
RTOR Reduction (vph)	0	17	0	0	5	0	0	0	14	0	0	0
Lane Group Flow (vph)	0	399	0	0	545	0	0	80	10	102	170	0
Heavy Vehicles (%)	0%	5%	0%	9%	5%	7%	0%	0%	10%	2%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	6		
Actuated Green, G (s)		24.6			31.1			55.0	55.0	68.9	63.2	
Effective Green, g (s)		24.6			31.1			55.0	55.0	68.9	63.2	
Actuated g/C Ratio		0.19			0.24			0.42	0.42	0.53	0.49	
Clearance Time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		603			723			681	621	744	896	
v/s Ratio Prot										c0.01	c0.09	
v/s Ratio Perm		0.13			c0.18			0.05	0.01	0.06		
v/c Ratio		0.66			0.75			0.12	0.02	0.14	0.19	
Uniform Delay, d1		48.8			45.9			22.8	21.8	15.2	18.9	
Progression Factor		0.25			1.00			1.00	1.00	0.21	0.39	
Incremental Delay, d2		2.4			4.5			0.4	0.0	0.1	0.4	
Delay (s)		14.5			50.4			23.1	21.8	3.2	7.8	
Level of Service		B			D			C	C	A	A	
Approach Delay (s/veh)		14.5			50.4			22.8			6.1	
Approach LOS		B			D			C			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	48.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBR	NBT	SBL	SBT	Ø1	Ø3	Ø4	Ø7	Ø8
Lane Configurations									
Traffic Volume (vph)	78	1043	229	927					
Future Volume (vph)	78	1043	229	927					
Turn Type	Over	NA	Prot	NA					
Protected Phases	5	6	5	2	1	3	4	7	8
Permitted Phases									
Detector Phase	5	6	5	2					
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	11.0	24.0	11.0	24.0
Total Split (s)	21.0	53.0	21.0	62.0	12.0	12.0	44.0	19.0	37.0
Total Split (%)	16.2%	40.8%	16.2%	47.7%	9%	9%	34%	15%	28%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0					
Total Lost Time (s)	6.0	6.0	6.0	6.0					
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	13.9	55.0	13.9	64.4					
Actuated g/C Ratio	0.11	0.42	0.11	0.50					
v/c Ratio	0.11	0.54	0.67	0.57					
Control Delay (s/veh)	0.3	8.6	65.3	26.5					
Queue Delay	0.0	0.1	0.0	0.0					
Total Delay (s/veh)	0.3	8.6	65.3	26.5					
LOS	A	A	E	C					
Approach Delay (s/veh)		8.6		34.2					
Approach LOS		A		C					

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay (s/veh): 20.9	Intersection LOS: C
Intersection Capacity Utilization 36.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Northside Dr & Hemphill Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	78	1043	0	229	927
Future Volume (vph)	0	78	1043	0	229	927
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2760	4988		3400	3505
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2760	4988		3400	3505
Peak-hour factor, PHF	0.69	0.69	0.92	0.92	0.94	0.94
Adj. Flow (vph)	0	113	1134	0	244	986
RTOR Reduction (vph)	0	101	0	0	0	0
Lane Group Flow (vph)	0	12	1134	0	244	986
Heavy Vehicles (%)	0%	3%	4%	0%	3%	3%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		13.9	55.0		13.9	63.2
Effective Green, g (s)		13.9	55.0		13.9	63.2
Actuated g/C Ratio		0.11	0.42		0.11	0.49
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		295	2110		363	1703
v/s Ratio Prot		0.00	0.23		c0.07	c0.28
v/s Ratio Perm						
v/c Ratio		0.04	0.54		0.67	0.58
Uniform Delay, d1		52.1	28.0		55.9	23.9
Progression Factor		1.00	0.26		1.00	1.00
Incremental Delay, d2		0.1	0.8		4.8	1.4
Delay (s)		52.1	8.2		60.7	25.3
Level of Service		D	A		E	C
Approach Delay (s/veh)	52.1		8.2			32.3
Approach LOS	D		A			C

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	11.0
Intersection LOS	B

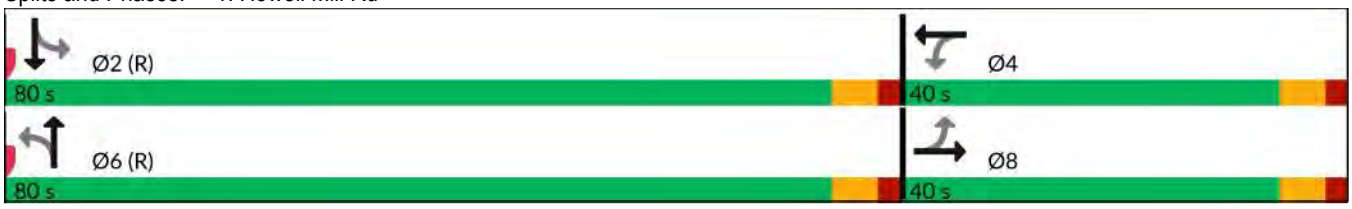
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	260	631	632
Demand Flow Rate, veh/h	276	656	660
Vehicles Circulating, veh/h	341	289	185
Vehicles Exiting, veh/h	604	556	432
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.9	13.0	10.6
Approach LOS	A	B	B

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
A (Intercept)	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	276	656	660
Cap Entry Lane, veh/h	975	1028	1143
Entry HV Adj Factor	0.942	0.962	0.957
Flow Entry, veh/h	260	631	632
Cap Entry, veh/h	918	988	1094
V/C Ratio	0.283	0.638	0.578
Control Delay, s/veh	6.9	13.0	10.6
LOS	A	B	B
95th %tile Queue, veh	1	5	4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	99	61	15	63	3	276	25	623
Future Volume (vph)	99	61	15	63	3	276	25	623
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	40.0	40.0	40.0	40.0	80.0	80.0	80.0	80.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		21.5		21.5	86.5	86.5	86.5	86.5
Actuated g/C Ratio		0.18		0.18	0.72	0.72	0.72	0.72
v/c Ratio		0.80		0.37	0.01	0.25	0.03	0.52
Control Delay (s/veh)		69.7		40.0	6.7	6.9	4.6	6.2
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)		69.7		40.0	6.7	6.9	4.6	6.3
LOS		E		D	A	A	A	A
Approach Delay (s/veh)		69.7		40.0		6.9		6.2
Approach LOS		E		D		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay (s/veh): 18.1	Intersection LOS: B
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Howell Mill Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	61	7	15	63	24	3	276	13	25	623	51
Future Volume (veh/h)	99	61	7	15	63	24	3	276	13	25	623	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1900	1796	1900	1900	1900	1885	1900	1900	1885	1870
Adj Flow Rate, veh/h	112	69	8	17	72	28	3	317	15	26	642	53
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.87	0.87	0.87	0.97	0.97	0.97
Percent Heavy Veh, %	1	0	0	7	0	0	0	1	0	0	1	2
Cap, veh/h	174	86	9	56	185	65	630	1336	63	799	1285	106
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.75	0.75	0.75	1.00	1.00	1.00
Sat Flow, veh/h	829	565	62	145	1220	429	761	1785	84	1065	1718	142
Grp Volume(v), veh/h	189	0	0	117	0	0	3	0	332	26	0	695
Grp Sat Flow(s),veh/h/ln	1455	0	0	1794	0	0	761	0	1870	1065	0	1860
Q Serve(g_s), s	8.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	6.5	0.2	0.0	0.0
Cycle Q Clear(g_c), s	15.3	0.0	0.0	7.0	0.0	0.0	0.1	0.0	6.5	6.7	0.0	0.0
Prop In Lane	0.59		0.04	0.15		0.24	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	269	0	0	307	0	0	630	0	1399	799	0	1391
V/C Ratio(X)	0.70	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.24	0.03	0.00	0.50
Avail Cap(c_a), veh/h	465	0	0	533	0	0	630	0	1399	799	0	1391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.86	0.00	0.86
Uniform Delay (d), s/veh	49.7	0.0	0.0	46.1	0.0	0.0	3.8	0.0	4.6	0.2	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.4	0.1	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	0.0	3.2	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.1	0.0	0.0	46.9	0.0	0.0	3.8	0.0	5.0	0.3	0.0	1.1
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		189			117			335			721	
Approach Delay, s/veh		53.1			46.9			5.0			1.1	
Approach LOS		D			D			A			A	

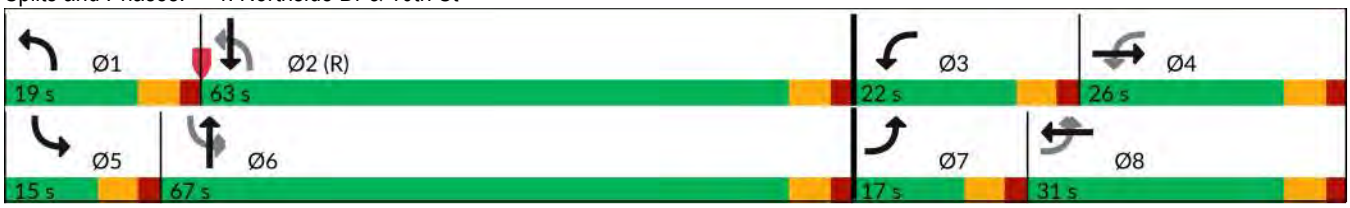
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		95.8		24.2		95.8		24.2				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		74.0		34.0		74.0		34.0				
Max Q Clear Time (g_c+I1), s		8.7		9.0		8.5		17.3				
Green Ext Time (p_c), s		5.8		0.6		2.2		0.9				

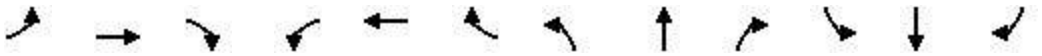
Intersection Summary	
HCM 7th Control Delay, s/veh	13.2
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	87	101	210	187	23	148	1364	275	81	1297
Future Volume (vph)	87	101	210	187	23	148	1364	275	81	1297
Turn Type	D.P+P	NA	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA
Protected Phases	7	4	3	8		1	6		5	2
Permitted Phases	8		4		8	2		6	6	
Detector Phase	7	4	3	8	8	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	5.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Split (s)	11.0	22.0	11.0	22.0	22.0	11.0	22.0	22.0	11.0	22.0
Total Split (s)	17.0	26.0	22.0	31.0	31.0	19.0	67.0	67.0	15.0	63.0
Total Split (%)	13.1%	20.0%	16.9%	23.8%	23.8%	14.6%	51.5%	51.5%	11.5%	48.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	C-Max
Act Effct Green (s)	30.2	14.6	30.2	20.1	20.1	75.8	67.9	67.9	75.8	64.6
Actuated g/C Ratio	0.23	0.11	0.23	0.15	0.15	0.58	0.52	0.52	0.58	0.50
v/c Ratio	0.45	0.36	0.70	0.76	0.08	0.71	0.52	0.29	0.37	0.84
Control Delay (s/veh)	40.9	51.5	50.1	69.6	0.4	45.5	22.1	3.0	15.2	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.2
Total Delay (s/veh)	40.9	51.5	50.1	69.6	0.4	45.5	22.2	3.0	15.2	25.8
LOS	D	D	D	E	A	D	C	A	B	C
Approach Delay (s/veh)		46.9		56.0			21.2			25.2
Approach LOS		D		E			C			C

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay (s/veh): 28.4	Intersection LOS: C
Intersection Capacity Utilization 81.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: Northside Dr & 10th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	101	12	210	187	23	148	1364	275	81	1297	71
Future Volume (veh/h)	87	101	12	210	187	23	148	1364	275	81	1297	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1900	1870	1856	1900	1900	1885	1885	1870	1870	1900
Adj Flow Rate, veh/h	109	126	15	244	217	27	151	1392	0	87	1395	76
Peak Hour Factor	0.80	0.80	0.80	0.86	0.86	0.86	0.98	0.98	0.98	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	0	2	3	0	0	1	1	2	2	0
Cap, veh/h	198	248	29	324	251	218	244	2972		284	1928	105
Arrive On Green	0.07	0.08	0.08	0.12	0.14	0.14	0.05	0.58	0.00	0.04	0.56	0.56
Sat Flow, veh/h	1810	3178	373	1781	1856	1610	1810	5147	1598	1781	3427	186
Grp Volume(v), veh/h	109	69	72	244	217	27	151	1392	0	87	722	749
Grp Sat Flow(s),veh/h/ln	1810	1763	1788	1781	1856	1610	1810	1716	1598	1781	1777	1837
Q Serve(g_s), s	6.7	4.9	5.0	16.0	14.9	1.9	4.6	20.4	0.0	2.6	38.9	39.2
Cycle Q Clear(g_c), s	6.7	4.9	5.0	16.0	14.9	1.9	4.6	20.4	0.0	2.6	38.9	39.2
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	198	138	140	324	251	218	244	2972		284	1000	1033
V/C Ratio(X)	0.55	0.50	0.52	0.75	0.86	0.12	0.62	0.47		0.31	0.72	0.73
Avail Cap(c_a), veh/h	233	271	275	324	357	310	332	2972		342	1000	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	57.5	57.6	48.3	55.0	49.4	20.6	15.9	0.0	12.2	20.9	21.0
Incr Delay (d2), s/veh	2.4	2.8	2.9	9.0	13.3	0.2	2.5	0.1	0.0	0.6	4.5	4.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.3	2.4	8.1	7.8	0.8	2.2	7.8	0.0	1.0	16.7	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.4	60.3	60.5	57.3	68.3	49.6	23.2	16.0	0.0	12.8	25.5	25.5
LnGrp LOS	D	E	E	E	E	D	C	B		B	C	C
Approach Vol, veh/h		250			488			1543			1558	
Approach Delay, s/veh		54.8			61.8			16.7			24.7	
Approach LOS		D			E			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	79.1	22.0	16.1	10.8	81.1	14.5	23.6
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	57.0	16.0	20.0	9.0	61.0	11.0	25.0
Max Q Clear Time (g_c+I1), s	6.6	41.2	18.0	7.0	4.6	22.4	8.7	16.9
Green Ext Time (p_c), s	0.2	9.0	0.0	0.5	0.1	13.3	0.0	0.7

Intersection Summary	
HCM 7th Control Delay, s/veh	28.2
HCM 7th LOS	C

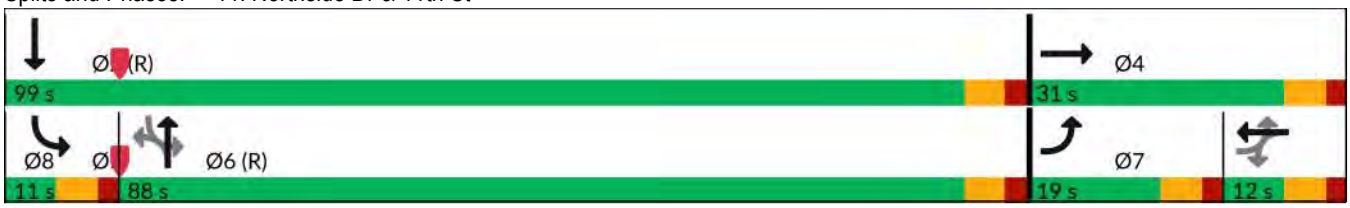
Notes

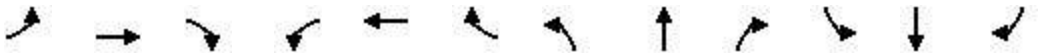
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	97	5	4	1	4	1486	29	1398
Future Volume (vph)	97	5	4	1	4	1486	29	1398
Turn Type	D.P+P	NA	Perm	NA	Perm	NA	D.P+P	NA
Protected Phases	7	4		8		6	5	2
Permitted Phases	8		8		6		6	
Detector Phase	7	4	8	8	6	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	11.0	24.0	24.0	11.0	24.0
Total Split (s)	19.0	31.0	12.0	12.0	88.0	88.0	11.0	99.0
Total Split (%)	14.6%	23.8%	9.2%	9.2%	67.7%	67.7%	8.5%	76.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0		6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	16.6	21.4		5.8		90.0	93.0	96.6
Actuated g/C Ratio	0.13	0.16		0.04		0.69	0.72	0.74
v/c Ratio	0.57	0.34		0.51		0.73	0.19	0.64
Control Delay (s/veh)	58.0	26.1		33.6		9.5	5.1	5.2
Queue Delay	0.0	0.0		0.0		0.6	0.0	0.0
Total Delay (s/veh)	58.0	26.1		33.6		10.2	5.1	5.2
LOS	E	C		C		B	A	A
Approach Delay (s/veh)		43.5		33.6		10.2		5.2
Approach LOS		D		C		B		A

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay (s/veh): 10.3	Intersection LOS: B
Intersection Capacity Utilization 66.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Northside Dr & 11th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	5	76	4	1	34	4	1486	25	29	1398	61
Future Volume (veh/h)	97	5	76	4	1	34	4	1486	25	29	1398	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1856	1900	1900	1900	1530	1885	1900	1900	1870	1870
Adj Flow Rate, veh/h	124	6	97	6	2	55	5	1689	28	33	1607	70
Peak Hour Factor	0.78	0.78	0.78	0.62	0.62	0.62	0.88	0.88	0.88	0.87	0.87	0.87
Percent Heavy Veh, %	2	0	3	0	0	0	25	1	0	0	2	2
Cap, veh/h	261	16	264	35	5	65	30	2328	39	204	2550	111
Arrive On Green	0.08	0.17	0.17	0.05	0.05	0.05	0.66	0.66	0.66	0.05	1.00	1.00
Sat Flow, veh/h	1781	95	1530	93	111	1402	3	3516	58	1810	3470	151
Grp Volume(v), veh/h	124	0	103	63	0	0	901	0	821	33	820	857
Grp Sat Flow(s),veh/h/ln	1781	0	1625	1606	0	0	1872	0	1705	1810	1777	1843
Q Serve(g_s), s	8.5	0.0	7.3	2.7	0.0	0.0	0.0	0.0	40.8	0.7	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	7.3	5.0	0.0	0.0	40.2	0.0	40.8	0.7	0.0	0.0
Prop In Lane	1.00		0.94	0.10		0.87	0.01		0.03	1.00		0.08
Lane Grp Cap(c), veh/h	261	0	280	104	0	0	1267	0	1129	204	1306	1355
V/C Ratio(X)	0.47	0.00	0.37	0.60	0.00	0.00	0.71	0.00	0.73	0.16	0.63	0.63
Avail Cap(c_a), veh/h	296	0	312	104	0	0	1267	0	1129	225	1306	1355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.55	0.55	0.55
Uniform Delay (d), s/veh	53.3	0.0	47.5	61.5	0.0	0.0	14.2	0.0	14.3	13.2	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.8	9.4	0.0	0.0	3.4	0.0	4.1	0.2	1.3	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	3.1	2.4	0.0	0.0	16.9	0.0	15.7	0.3	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.6	0.0	48.3	70.9	0.0	0.0	17.6	0.0	18.4	13.4	1.3	1.2
LnGrp LOS	D		D	E			B		B	B	A	A
Approach Vol, veh/h		227			63			1722			1710	
Approach Delay, s/veh		51.8			70.9			18.0			1.5	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		101.6		28.4	9.5	92.1	16.4	12.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		93.0		25.0	5.0	82.0	13.0	6.0				
Max Q Clear Time (g_c+I1), s		2.0		9.3	2.7	42.8	10.5	7.0				
Green Ext Time (p_c), s		22.1		0.5	0.0	18.8	0.1	0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			13.4									
HCM 7th LOS			B									

Intersection	
Intersection Delay, s/veh	17.9
Intersection LOS	C

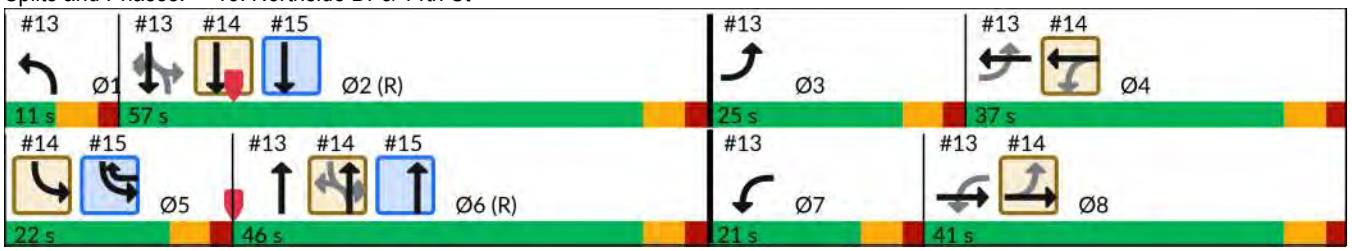
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	67	570	594	859
Demand Flow Rate, veh/h	68	577	603	872
Vehicles Circulating, veh/h	1088	533	273	326
Vehicles Exiting, veh/h	67	343	883	784
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.2	18.9	11.0	22.6
Approach LOS	B	C	B	C

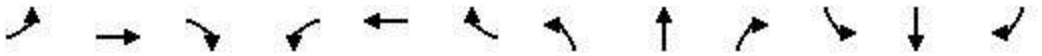
Lane	Left	Left	Left	Left	Bypass
Designated Moves	LTR	LTR	LTR	LT	R
Assumed Moves	LTR	LTR	LTR	LT	
RT Channelized					Yield
Lane Util	1.000	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	68	577	603	829	43
Cap Entry Lane, veh/h	455	801	1045	990	1289
Entry HV Adj Factor	0.985	0.988	0.985	0.988	0.926
Flow Entry, veh/h	67	570	594	819	40
Cap Entry, veh/h	448	791	1029	978	1193
V/C Ratio	0.149	0.720	0.577	0.838	0.034
Control Delay, s/veh	10.2	18.9	11.0	23.5	3.3
LOS	B	C	B	C	A
95th %tile Queue, veh	1	6	4	10	0

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	Ø5
Lane Configurations										
Traffic Volume (vph)	69	217	217	394	78	1223	9	950	102	
Future Volume (vph)	69	217	217	394	78	1223	9	950	102	
Turn Type	D.P+P	NA	D.P+P	NA	D.P+P	NA	Perm	NA	Perm	
Protected Phases	3	8	7	4	1	6		2		5
Permitted Phases	4		8		2		2		2	
Detector Phase	3	8	7	4	1	6	2	2	2	
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	11.0
Total Split (s)	25.0	41.0	21.0	37.0	11.0	46.0	57.0	57.0	57.0	22.0
Total Split (%)	19.2%	31.5%	16.2%	28.5%	8.5%	35.4%	43.8%	43.8%	43.8%	17%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	50.0	35.8	50.0	40.7	56.0	43.2	51.0	51.0	51.0	
Actuated g/C Ratio	0.38	0.28	0.38	0.31	0.43	0.33	0.39	0.39	0.39	
v/c Ratio	0.36	0.35	0.54	0.80	0.61	0.82	0.19	0.81	0.18	
Control Delay (s/veh)	26.8	36.4	13.1	16.3	46.4	50.9	12.7	9.9	0.7	
Queue Delay	0.0	0.1	3.3	3.3	0.0	0.2	0.0	0.7	0.0	
Total Delay (s/veh)	26.8	36.4	16.4	19.6	46.4	51.1	12.7	10.6	0.7	
LOS	C	D	B	B	D	D	B	B	A	
Approach Delay (s/veh)		34.5		18.5		50.9		9.7		
Approach LOS		C		B		D		A		

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 29.7	Intersection LOS: C
Intersection Capacity Utilization 77.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: Northside Dr & 14th St





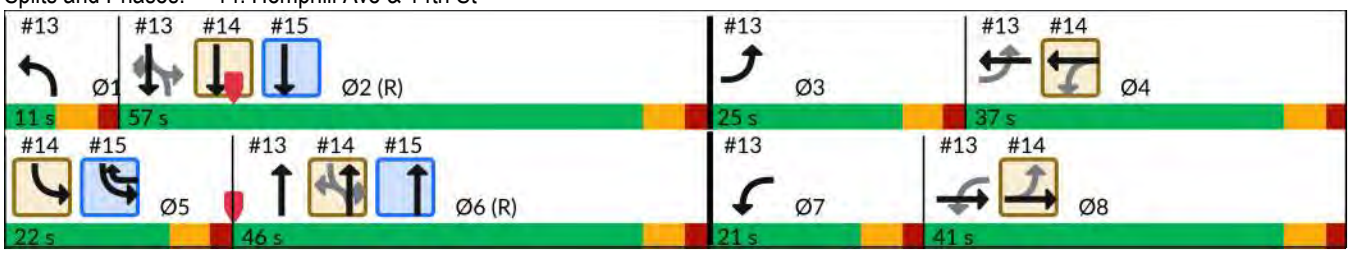
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	217	57	217	394	26	78	1223	91	9	950	102
Future Volume (vph)	69	217	57	217	394	26	78	1223	91	9	950	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3415		1770	1847		1787	5036		1805	3539	1568
Flt Permitted	0.19	1.00		0.48	1.00		0.09	1.00		0.08	1.00	1.00
Satd. Flow (perm)	358	3415		898	1847		167	5036		149	3539	1568
Peak-hour factor, PHF	0.81	0.81	0.81	0.91	0.91	0.91	0.95	0.95	0.95	0.84	0.84	0.84
Adj. Flow (vph)	85	268	70	238	433	29	82	1287	96	11	1131	121
RTOR Reduction (vph)	0	18	0	0	1	0	0	6	0	0	0	74
Lane Group Flow (vph)	85	320	0	238	461	0	82	1377	0	11	1131	47
Heavy Vehicles (%)	3%	2%	4%	2%	2%	0%	1%	2%	1%	0%	2%	3%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		Perm	NA	Perm
Protected Phases	3	8		7	4		1	6			2	
Permitted Phases	4			8			2			2		2
Actuated Green, G (s)	50.0	35.8		50.0	40.7		56.0	43.2		51.0	51.0	51.0
Effective Green, g (s)	50.0	35.8		50.0	40.7		56.0	43.2		51.0	51.0	51.0
Actuated g/C Ratio	0.38	0.28		0.38	0.31		0.43	0.33		0.39	0.39	0.39
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	237	940		440	578		134	1673		58	1388	615
v/s Ratio Prot	0.03	0.09		c0.06	c0.25		c0.02	0.27			c0.32	
v/s Ratio Perm	0.11			0.15			0.24			0.07		0.03
v/c Ratio	0.36	0.34		0.54	0.80		0.61	0.82		0.19	0.81	0.08
Uniform Delay, d1	28.5	37.7		28.5	40.9		27.2	39.9		25.9	35.3	24.8
Progression Factor	1.00	1.00		0.42	0.20		1.62	1.19		0.30	0.19	0.12
Incremental Delay, d2	0.9	0.2		0.8	4.4		5.6	3.3		3.9	3.0	0.1
Delay (s)	29.4	37.9		12.6	12.7		49.6	50.6		11.8	9.8	3.0
Level of Service	C	D		B	B		D	D		B	A	A
Approach Delay (s/veh)		36.2			12.7			50.6			9.2	
Approach LOS		D			B			D			A	

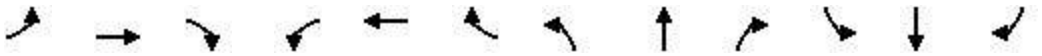
Intersection Summary			
HCM 2000 Control Delay (s/veh)	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	Ø1	Ø3	Ø7
Lane Configurations												
Traffic Volume (vph)	4	251	29	635	53	183	34	26	143			
Future Volume (vph)	4	251	29	635	53	183	34	26	143			
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	D.P+P	NA			
Protected Phases		8		4		6		5	2	1	3	7
Permitted Phases	8		4		6		6	6				
Detector Phase	8	8	4	4	6	6	6	5	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	28.0	24.0
Total Split (s)	41.0	41.0	37.0	37.0	46.0	46.0	46.0	22.0	57.0	11.0	25.0	21.0
Total Split (%)	31.5%	31.5%	28.5%	28.5%	35.4%	35.4%	35.4%	16.9%	43.8%	8%	19%	16%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0			
Total Lost Time (s)		6.0		6.0		6.0	6.0	6.0	6.0			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	None	None	None
Act Effct Green (s)		35.8		40.7		43.2	43.2	56.0	51.0			
Actuated g/C Ratio		0.28		0.31		0.33	0.33	0.43	0.39			
v/c Ratio		0.44		0.83		0.59	0.08	0.08	0.25			
Control Delay (s/veh)		18.0		49.7		42.0	0.2	2.6	8.1			
Queue Delay		0.9		0.2		0.6	0.0	0.0	0.0			
Total Delay (s/veh)		18.9		50.0		42.6	0.2	2.6	8.1			
LOS		B		D		D	A	A	A			
Approach Delay (s/veh)		18.9		50.0		37.3			7.3			
Approach LOS		B		D		D			A			

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 35.4	Intersection LOS: D
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Hemphill Ave & 14th St





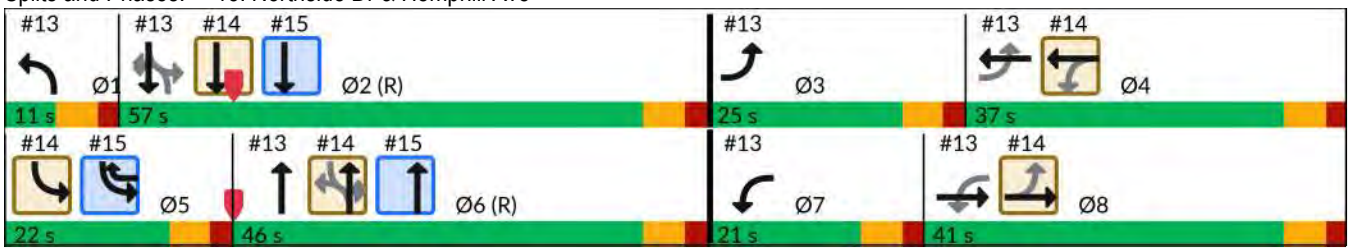
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	251	82	29	635	75	53	183	34	26	143	0
Future Volume (vph)	4	251	82	29	635	75	53	183	34	26	143	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frt		0.96			0.98			1.00	0.85	1.00	1.00	
Flt Protected		1.00			1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3369			3459			1862	1524	1805	1881	
Flt Permitted		0.94			0.90			0.88	1.00	0.39	1.00	
Satd. Flow (perm)		3180			3104			1654	1524	748	1881	
Peak-hour factor, PHF	0.85	0.85	0.85	0.91	0.91	0.91	0.73	0.73	0.73	0.79	0.79	0.79
Adj. Flow (vph)	5	295	96	32	698	82	73	251	47	33	181	0
RTOR Reduction (vph)	0	23	0	0	6	0	0	0	31	0	0	0
Lane Group Flow (vph)	0	373	0	0	806	0	0	324	16	33	181	0
Heavy Vehicles (%)	0%	3%	4%	0%	3%	0%	4%	0%	6%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	6		
Actuated Green, G (s)		35.8			40.7			43.2	43.2	56.0	51.0	
Effective Green, g (s)		35.8			40.7			43.2	43.2	56.0	51.0	
Actuated g/C Ratio		0.28			0.31			0.33	0.33	0.43	0.39	
Clearance Time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		875			971			549	506	426	737	
v/s Ratio Prot										c0.01	c0.10	
v/s Ratio Perm		0.12			c0.26			c0.20	0.01	0.03		
v/c Ratio		0.43			0.83			0.59	0.03	0.08	0.25	
Uniform Delay, d1		38.7			41.4			36.0	29.3	22.1	26.6	
Progression Factor		0.46			1.00			1.00	1.00	0.12	0.28	
Incremental Delay, d2		0.3			6.0			4.6	0.1	0.1	0.7	
Delay (s)		18.0			47.4			40.7	29.4	2.8	8.0	
Level of Service		B			D			D	C	A	A	
Approach Delay (s/veh)		18.0			47.4			39.2			7.2	
Approach LOS		B			D			D			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBR	NBT	SBL	SBT	Ø1	Ø3	Ø4	Ø7	Ø8
Lane Configurations									
Traffic Volume (vph)	269	1326	181	1065					
Future Volume (vph)	269	1326	181	1065					
Turn Type	Over	NA	Prot	NA					
Protected Phases	5	6	5	2	1	3	4	7	8
Permitted Phases									
Detector Phase	5	6	5	2					
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	28.0	24.0	24.0	24.0
Total Split (s)	22.0	46.0	22.0	57.0	11.0	25.0	37.0	21.0	41.0
Total Split (%)	16.9%	35.4%	16.9%	43.8%	8%	19%	28%	16%	32%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0					
Total Lost Time (s)	6.0	6.0	6.0	6.0					
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	12.8	43.2	12.8	51.0					
Actuated g/C Ratio	0.10	0.33	0.10	0.39					
v/c Ratio	0.27	0.83	0.60	0.86					
Control Delay (s/veh)	2.2	17.8	63.2	44.0					
Queue Delay	0.0	0.5	0.0	0.1					
Total Delay (s/veh)	2.2	18.3	63.2	44.0					
LOS	A	B	E	D					
Approach Delay (s/veh)		18.3		46.8					
Approach LOS		B		D					

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 29.4	Intersection LOS: C
Intersection Capacity Utilization 45.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Northside Dr & Hemphill Ave



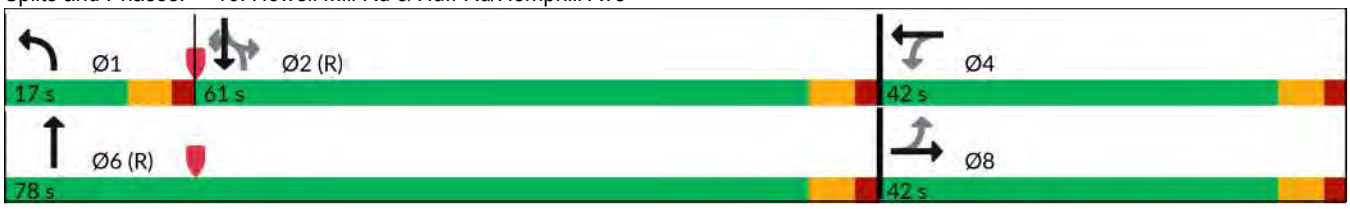
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	269	1326	0	181	1065
Future Volume (vph)	0	269	1326	0	181	1065
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2814	5085		3467	3539
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2814	5085		3467	3539
Peak-hour factor, PHF	0.82	0.82	0.95	0.95	0.89	0.89
Adj. Flow (vph)	0	328	1396	0	203	1197
RTOR Reduction (vph)	0	296	0	0	0	0
Lane Group Flow (vph)	0	32	1396	0	203	1197
Heavy Vehicles (%)	0%	1%	2%	0%	1%	2%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		12.8	43.2		12.8	51.0
Effective Green, g (s)		12.8	43.2		12.8	51.0
Actuated g/C Ratio		0.10	0.33		0.10	0.39
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		277	1689		341	1388
v/s Ratio Prot		0.01	0.27		c0.06	c0.34
v/s Ratio Perm						
v/c Ratio		0.12	0.83		0.60	0.86
Uniform Delay, d1		53.4	40.0		56.1	36.3
Progression Factor		1.00	0.36		1.00	1.00
Incremental Delay, d2		0.1	2.9		2.8	7.3
Delay (s)		53.6	17.1		58.9	43.6
Level of Service		D	B		E	D
Approach Delay (s/veh)	53.6		17.1			45.8
Approach LOS	D		B			D

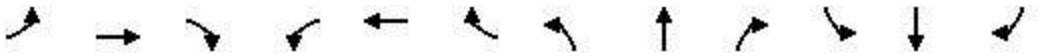
Intersection Summary			
HCM 2000 Control Delay (s/veh)	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	259	1	3	9	233	411	2	530	245
Future Volume (vph)	259	1	3	9	233	411	2	530	245
Turn Type	Perm	NA	Perm	NA	D.P+P	NA	Perm	NA	Perm
Protected Phases		8		4	1	6		2	
Permitted Phases	8		4		2		2		2
Detector Phase	8	8	4	4	1	6	2	2	2
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	42.0	42.0	42.0	42.0	17.0	78.0	61.0	61.0	61.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	14.2%	65.0%	50.8%	50.8%	50.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	30.3	30.3		30.3	71.7	77.7		60.4	60.4
Actuated g/C Ratio	0.25	0.25		0.25	0.60	0.65		0.50	0.50
v/c Ratio	0.86	0.45		0.05	0.64	0.40		0.63	0.31
Control Delay (s/veh)	64.6	6.4		21.7	18.4	12.2		27.0	6.4
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	64.6	6.4		21.7	18.4	12.2		27.0	6.4
LOS	E	A		C	B	B		C	A
Approach Delay (s/veh)		37.2		21.7		14.4		20.5	
Approach LOS		D		C		B		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 22.8	Intersection LOS: C
Intersection Capacity Utilization 86.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 16: Howell Mill Rd & Huff Rd/Hemphill Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	259	1	229	3	9	8	233	411	9	2	530	245
Future Volume (veh/h)	259	1	229	3	9	8	233	411	9	2	530	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1856	1900	1900	1707	1856	1856	1900	1900	1870	1856
Adj Flow Rate, veh/h	301	1	266	3	10	9	268	472	10	2	589	272
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	1	0	3	0	0	13	3	3	0	0	2	3
Cap, veh/h	358	2	482	70	222	178	355	1086	23	31	856	721
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.09	0.60	0.60	0.46	0.46	0.46
Sat Flow, veh/h	1404	6	1605	119	739	594	1767	1810	38	1	1868	1572
Grp Volume(v), veh/h	301	0	267	22	0	0	268	0	482	591	0	272
Grp Sat Flow(s),veh/h/ln	1404	0	1611	1452	0	0	1767	0	1849	1869	0	1572
Q Serve(g_s), s	19.2	0.0	16.7	0.1	0.0	0.0	9.7	0.0	16.9	0.0	0.0	13.6
Cycle Q Clear(g_c), s	36.0	0.0	16.7	16.8	0.0	0.0	9.7	0.0	16.9	30.0	0.0	13.6
Prop In Lane	1.00		1.00	0.14		0.41	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h	358	0	483	470	0	0	355	0	1109	887	0	721
V/C Ratio(X)	0.84	0.00	0.55	0.05	0.00	0.00	0.76	0.00	0.43	0.67	0.00	0.38
Avail Cap(c_a), veh/h	358	0	483	470	0	0	355	0	1109	887	0	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	35.2	29.9	0.0	0.0	20.8	0.0	13.0	25.7	0.0	21.3
Incr Delay (d2), s/veh	16.3	0.0	1.4	0.0	0.0	0.0	9.0	0.0	1.2	4.0	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.0	6.7	0.5	0.0	0.0	4.6	0.0	7.0	13.9	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	62.4	0.0	36.6	29.9	0.0	0.0	29.8	0.0	14.2	29.7	0.0	22.8
LnGrp LOS	E		D	C			C		B	C		C
Approach Vol, veh/h		568			22			750			863	
Approach Delay, s/veh		50.3			29.9			19.8			27.5	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	17.0	61.0		42.0		78.0		42.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	11.0	55.0		36.0		72.0		36.0				
Max Q Clear Time (g_c+I1), s	11.7	32.0		18.8		18.9		38.0				
Green Ext Time (p_c), s	0.0	4.9		0.0		3.3		0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			30.8									
HCM 7th LOS			C									

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	473	737	816
Demand Flow Rate, veh/h	483	752	832
Vehicles Circulating, veh/h	501	204	283
Vehicles Exiting, veh/h	455	911	701
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	13.4	13.0	20.4
Approach LOS	B	B	C

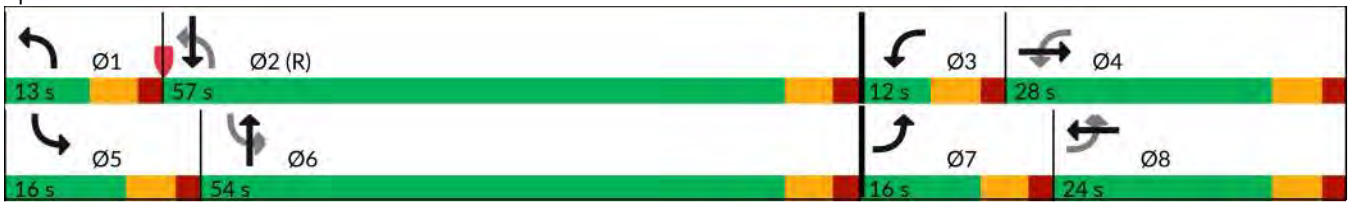
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
A (Intercept)	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	483	752	832
Cap Entry Lane, veh/h	828	1121	1034
Entry HV Adj Factor	0.979	0.980	0.980
Flow Entry, veh/h	473	737	816
Cap Entry, veh/h	811	1099	1014
V/C Ratio	0.583	0.671	0.805
Control Delay, s/veh	13.4	13.0	20.4
LOS	B	B	C
95th %tile Queue, veh	4	5	9

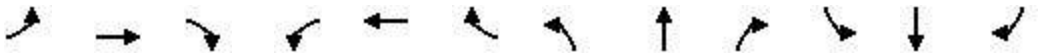
2030 BUILD MITIGATION

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	143	254	89	156	36	69	992	377	135	985
Future Volume (vph)	143	254	89	156	36	69	992	377	135	985
Turn Type	D.P+P	NA	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA
Protected Phases	7	4	3	8		1	6		5	2
Permitted Phases	8		4		8	2		6	6	
Detector Phase	7	4	3	8	8	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	5.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Split (s)	11.0	22.0	11.0	22.0	22.0	11.0	22.0	22.0	11.0	22.0
Total Split (s)	16.0	28.0	12.0	24.0	24.0	13.0	54.0	54.0	16.0	57.0
Total Split (%)	14.5%	25.5%	10.9%	21.8%	21.8%	11.8%	49.1%	49.1%	14.5%	51.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	C-Max
Act Effct Green (s)	24.5	20.9	25.7	14.8	14.8	62.7	52.7	52.7	61.5	57.0
Actuated g/C Ratio	0.22	0.19	0.23	0.13	0.13	0.57	0.48	0.48	0.56	0.52
v/c Ratio	0.52	0.44	0.37	0.69	0.11	0.30	0.44	0.42	0.43	0.60
Control Delay (s/veh)	38.1	41.1	34.6	60.6	0.6	13.1	20.4	3.3	13.9	16.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)	38.1	41.1	34.6	60.6	0.6	13.1	20.4	3.3	13.9	16.8
LOS	D	D	C	E	A	B	C	A	B	B
Approach Delay (s/veh)		40.0		44.7			15.6			16.5
Approach LOS		D		D			B			B

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay (s/veh): 21.4	Intersection LOS: C
Intersection Capacity Utilization 69.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 4: Northside Dr & 10th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	254	20	89	156	36	69	992	377	135	985	65
Future Volume (veh/h)	143	254	20	89	156	36	69	992	377	135	985	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1826	1159	1737	1767	1900	1693	1841	1870	1870	1856	1841
Adj Flow Rate, veh/h	146	259	20	93	162	38	73	1055	0	139	1015	67
Peak Hour Factor	0.98	0.98	0.98	0.96	0.96	0.96	0.94	0.94	0.94	0.97	0.97	0.97
Percent Heavy Veh, %	4	5	50	11	9	0	14	4	2	2	3	4
Cap, veh/h	248	480	37	230	198	180	291	2645		376	1812	120
Arrive On Green	0.09	0.15	0.15	0.05	0.11	0.11	0.04	0.53	0.00	0.05	0.54	0.54
Sat Flow, veh/h	1753	3265	250	1654	1767	1610	1612	5025	1585	1781	3357	222
Grp Volume(v), veh/h	146	137	142	93	162	38	73	1055	0	139	533	549
Grp Sat Flow(s),veh/h/ln	1753	1735	1781	1654	1767	1610	1612	1675	1585	1781	1763	1816
Q Serve(g_s), s	8.0	8.0	8.1	5.2	9.9	2.4	2.2	13.8	0.0	3.9	21.9	21.9
Cycle Q Clear(g_c), s	8.0	8.0	8.1	5.2	9.9	2.4	2.2	13.8	0.0	3.9	21.9	21.9
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	248	255	262	230	198	180	291	2645		376	951	980
V/C Ratio(X)	0.59	0.54	0.54	0.40	0.82	0.21	0.25	0.40		0.37	0.56	0.56
Avail Cap(c_a), veh/h	251	347	356	230	289	263	329	2645		442	951	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	43.4	43.5	37.5	47.8	44.4	12.7	15.6	0.0	11.7	16.7	16.7
Incr Delay (d2), s/veh	3.5	1.8	1.8	1.1	11.1	0.6	0.4	0.1	0.0	0.6	2.4	2.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.5	3.7	2.2	4.9	1.0	0.8	5.1	0.0	1.5	9.0	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.3	45.2	45.2	38.6	58.9	45.0	13.2	15.7	0.0	12.3	19.1	19.0
LnGrp LOS	D	D	D	D	E	D	B	B		B	B	B
Approach Vol, veh/h		425			293			1128			1221	
Approach Delay, s/veh		44.2			50.6			15.6			18.3	
Approach LOS		D			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	65.4	12.0	22.2	11.9	63.9	15.9	18.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	7.0	51.0	6.0	22.0	10.0	48.0	10.0	18.0
Max Q Clear Time (g_c+I1), s	4.2	23.9	7.2	10.1	5.9	15.8	10.0	11.9
Green Ext Time (p_c), s	0.0	7.9	0.0	1.1	0.1	8.7	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	24.0
HCM 7th LOS	C

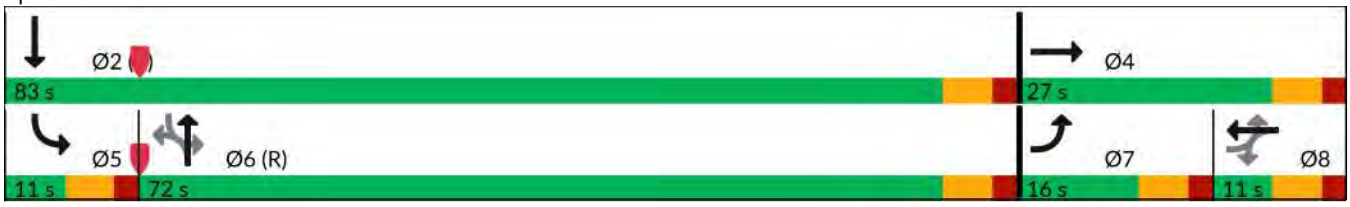
Notes

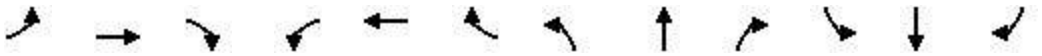
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	68	0	2	0	2	1185	27	1105
Future Volume (vph)	68	0	2	0	2	1185	27	1105
Turn Type	D.P+P	NA	Perm	NA	Perm	NA	D.P+P	NA
Protected Phases	7	4		8		6	5	2
Permitted Phases	8		8		6		6	
Detector Phase	7	4	8	8	6	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	11.0	24.0	24.0	11.0	24.0
Total Split (s)	16.0	27.0	11.0	11.0	72.0	72.0	11.0	83.0
Total Split (%)	14.5%	24.5%	10.0%	10.0%	65.5%	65.5%	10.0%	75.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0		6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	11.1	13.3		5.2		81.4	83.4	88.2
Actuated g/C Ratio	0.10	0.12		0.05		0.74	0.76	0.80
v/c Ratio	0.48	0.27		0.08		0.51	0.09	0.47
Control Delay (s/veh)	51.7	5.8		0.7		6.8	5.0	5.8
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay (s/veh)	51.7	5.8		0.7		6.9	5.0	5.8
LOS	D	A		A		A	A	A
Approach Delay (s/veh)		30.0		0.7		6.9		5.8
Approach LOS		C		A		A		A

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBSB, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay (s/veh): 7.6	Intersection LOS: A
Intersection Capacity Utilization 55.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Northside Dr & 11th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	0	61	2	0	7	2	1185	13	27	1105	65
Future Volume (veh/h)	68	0	61	2	0	7	2	1185	13	27	1105	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1811	1900	1900	1900	1900	1900	1841	1900	1900	1856	1767
Adj Flow Rate, veh/h	85	0	76	4	0	12	2	1222	13	30	1242	73
Peak Hour Factor	0.80	0.80	0.80	0.56	0.56	0.56	0.97	0.97	0.97	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	0	0	0	0	0	4	0	0	3	9
Cap, veh/h	232	0	241	51	7	51	33	2263	24	327	2484	146
Arrive On Green	0.06	0.00	0.16	0.04	0.00	0.04	0.65	0.65	0.65	0.03	0.73	0.73
Sat Flow, veh/h	1753	0	1535	242	155	1189	1	3469	37	1810	3384	199
Grp Volume(v), veh/h	85	0	76	16	0	0	648	0	589	30	646	669
Grp Sat Flow(s),veh/h/ln	1753	0	1535	1586	0	0	1838	0	1668	1810	1763	1820
Q Serve(g_s), s	5.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	20.8	0.6	16.9	17.0
Cycle Q Clear(g_c), s	5.0	0.0	4.8	1.0	0.0	0.0	20.8	0.0	20.8	0.6	16.9	17.0
Prop In Lane	1.00		1.00	0.25		0.75	0.00		0.02	1.00		0.11
Lane Grp Cap(c), veh/h	232	0	241	109	0	0	1232	0	1088	327	1294	1336
V/C Ratio(X)	0.37	0.00	0.32	0.15	0.00	0.00	0.53	0.00	0.54	0.09	0.50	0.50
Avail Cap(c_a), veh/h	287	0	293	113	0	0	1232	0	1088	360	1294	1336
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	46.6	0.0	41.1	50.9	0.0	0.0	10.3	0.0	10.3	7.9	6.1	6.1
Incr Delay (d2), s/veh	1.0	0.0	0.7	0.6	0.0	0.0	1.6	0.0	1.9	0.1	1.1	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	1.9	0.4	0.0	0.0	8.1	0.0	7.4	0.2	5.5	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.6	0.0	41.9	51.5	0.0	0.0	11.9	0.0	12.2	8.0	7.2	7.2
LnGrp LOS	D		D	D			B		B	A	A	A
Approach Vol, veh/h		161			16			1237			1345	
Approach Delay, s/veh		44.9			51.5			12.0			7.2	
Approach LOS		D			D			B			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		86.8		23.2	9.0	77.8	12.5	10.7				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		77.0		21.0	5.0	66.0	10.0	5.0				
Max Q Clear Time (g_c+I1), s		19.0		6.8	2.6	22.8	7.0	3.0				
Green Ext Time (p_c), s		12.5		0.3	0.0	10.8	0.0	0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			11.8									
HCM 7th LOS			B									

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

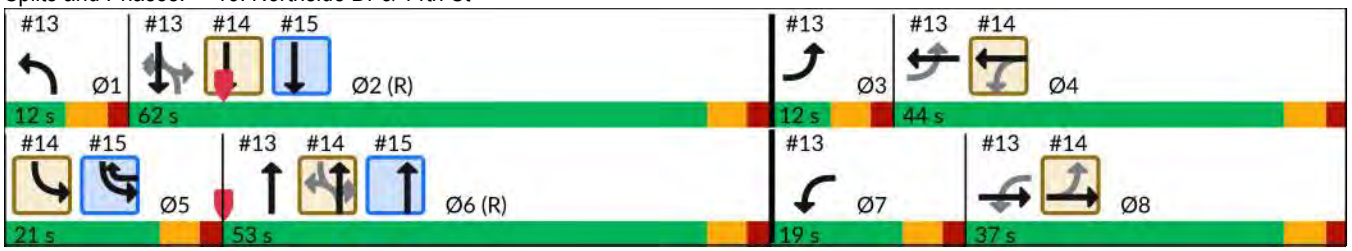
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	43	377	512	663
Demand Flow Rate, veh/h	48	397	554	702
Vehicles Circulating, veh/h	809	427	295	186
Vehicles Exiting, veh/h	47	422	562	638
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.6	9.8	11.0	10.4
Approach LOS	A	A	B	B

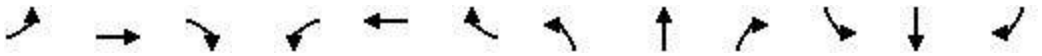
Lane	Left	Left	Left	Left	Bypass
Designated Moves	LTR	LTR	LTR	LT	R
Assumed Moves	LTR	LTR	LTR	LT	
RT Channelized					Free
Lane Util	1.000	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	4.976	
A (Intercept)	1380	1380	1380	1380	
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	
Entry Flow, veh/h	48	397	554	670	32
Cap Entry Lane, veh/h	605	893	1021	1141	1976
Entry HV Adj Factor	0.904	0.949	0.924	0.944	0.962
Flow Entry, veh/h	43	377	512	632	31
Cap Entry, veh/h	546	848	943	1077	1900
V/C Ratio	0.079	0.445	0.542	0.587	0.016
Control Delay, s/veh	7.6	9.8	11.0	10.9	0.0
LOS	A	A	B	B	A
95th %tile Queue, veh	0	2	3	4	0

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	Ø5
Lane Configurations										
Traffic Volume (vph)	70	321	165	311	57	994	4	892	53	
Future Volume (vph)	70	321	165	311	57	994	4	892	53	
Turn Type	D.P+P	NA	D.P+P	NA	D.P+P	NA	Perm	NA	Perm	
Protected Phases	3	8	7	4	1	6		2		5
Permitted Phases	4		8		2		2		2	
Detector Phase	3	8	7	4	1	6	2	2	2	
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	24.0	24.0	24.0	11.0
Total Split (s)	12.0	37.0	19.0	44.0	12.0	53.0	62.0	62.0	62.0	21.0
Total Split (%)	9.2%	28.5%	14.6%	33.8%	9.2%	40.8%	47.7%	47.7%	47.7%	16%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	37.6	25.0	37.6	31.6	69.6	54.5	64.0	64.0	64.0	
Actuated g/C Ratio	0.29	0.19	0.29	0.24	0.54	0.42	0.49	0.49	0.49	
v/c Ratio	0.45	0.64	0.66	0.78	0.24	0.58	0.03	0.56	0.07	
Control Delay (s/veh)	37.0	50.8	49.4	16.3	16.4	31.2	4.3	4.5	0.1	
Queue Delay	0.0	0.0	20.5	0.2	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	37.0	50.8	69.9	16.5	16.4	31.2	4.3	4.6	0.1	
LOS	D	D	E	B	B	C	A	A	A	
Approach Delay (s/veh)		48.6		34.8		30.5		4.3		
Approach LOS		D		C		C		A		

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay (s/veh): 26.0	Intersection LOS: C
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 13: Northside Dr & 14th St





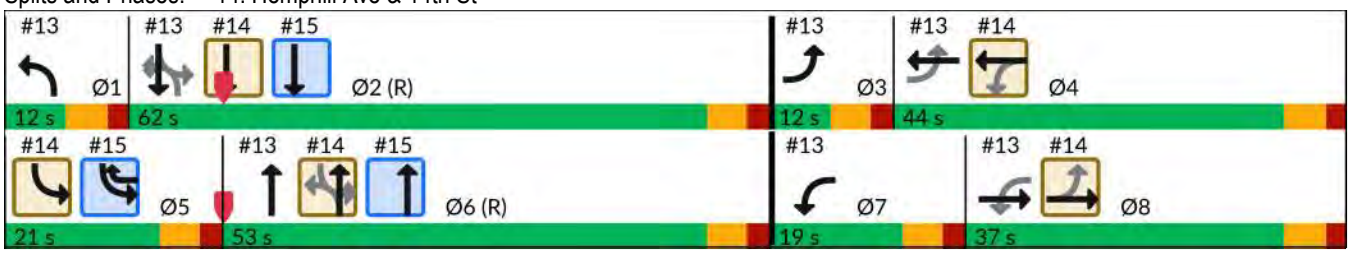
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	321	53	165	311	5	57	994	77	4	892	53
Future Volume (vph)	70	321	53	165	311	5	57	994	77	4	892	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1671	3454		1719	1824		1703	4899		1805	3505	1583
Flt Permitted	0.25	1.00		0.31	1.00		0.20	1.00		0.13	1.00	1.00
Satd. Flow (perm)	434	3454		567	1824		363	4899		248	3505	1583
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.90	0.90	0.90	0.93	0.93	0.93
Adj. Flow (vph)	81	373	62	181	342	5	63	1104	86	4	959	57
RTOR Reduction (vph)	0	11	0	0	1	0	0	6	0	0	0	29
Lane Group Flow (vph)	81	424	0	181	346	0	63	1184	0	4	959	28
Heavy Vehicles (%)	8%	2%	4%	5%	4%	0%	6%	4%	14%	0%	3%	2%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		Perm	NA	Perm
Protected Phases	3	8		7	4		1	6			2	
Permitted Phases	4			8			2			2		2
Actuated Green, G (s)	37.6	25.0		37.6	31.6		68.4	54.5		62.8	62.8	62.8
Effective Green, g (s)	37.6	25.0		37.6	31.6		68.4	54.5		62.8	62.8	62.8
Actuated g/C Ratio	0.29	0.19		0.29	0.24		0.53	0.42		0.48	0.48	0.48
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	182	664		275	443		248	2053		119	1693	764
v/s Ratio Prot	0.02	0.12		c0.06	c0.19		c0.01	0.24			c0.27	
v/s Ratio Perm	0.11			0.13			0.12			0.02		0.02
v/c Ratio	0.45	0.64		0.66	0.78		0.25	0.58		0.03	0.57	0.04
Uniform Delay, d1	35.8	48.3		37.1	46.0		16.9	28.9		17.7	23.9	17.7
Progression Factor	1.00	1.00		1.26	0.13		1.00	1.00		0.17	0.14	1.00
Incremental Delay, d2	1.7	2.0		4.5	7.0		0.5	1.2		0.4	1.1	0.1
Delay (s)	37.5	50.4		51.1	13.0		17.5	30.1		3.4	4.5	17.7
Level of Service	D	D		D	B		B	C		A	A	B
Approach Delay (s/veh)		48.3			26.1			29.5			5.2	
Approach LOS		D			C			C			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	Ø1	Ø3	Ø7
Lane Configurations												
Traffic Volume (vph)	5	324	12	449	30	42	22	86	143			
Future Volume (vph)	5	324	12	449	30	42	22	86	143			
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	D.P+P	NA			
Protected Phases		8		4		6		5	2	1	3	7
Permitted Phases	8		4		6		6	6				
Detector Phase	8	8	4	4	6	6	6	5	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	11.0	11.0
Total Split (s)	37.0	37.0	44.0	44.0	53.0	53.0	53.0	21.0	62.0	12.0	12.0	19.0
Total Split (%)	28.5%	28.5%	33.8%	33.8%	40.8%	40.8%	40.8%	16.2%	47.7%	9%	9%	15%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0			
Total Lost Time (s)		6.0		6.0		6.0	6.0	6.0	6.0			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	None	None	None
Act Effct Green (s)		25.0		31.6		54.5	54.5	68.4	64.0			
Actuated g/C Ratio		0.19		0.24		0.42	0.42	0.53	0.49			
v/c Ratio		0.69		0.77		0.12	0.03	0.14	0.19			
Control Delay (s/veh)		17.5		52.6		26.3	0.1	3.2	8.4			
Queue Delay		0.3		0.3		0.0	0.0	0.0	0.0			
Total Delay (s/veh)		17.8		52.9		26.3	0.1	3.2	8.4			
LOS		B		D		C	A	A	A			
Approach Delay (s/veh)		17.8		52.9		20.2			6.5			
Approach LOS		B		D		C			A			

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay (s/veh): 30.2	Intersection LOS: C
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 14: Hemphill Ave & 14th St



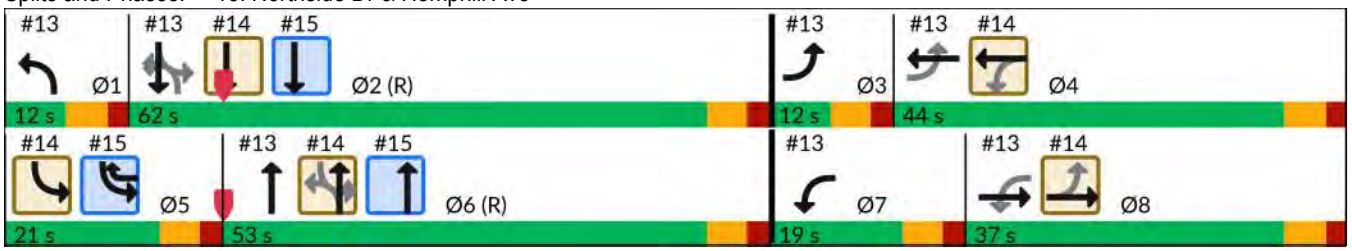
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	324	75	12	449	33	30	42	22	86	143	0
Future Volume (vph)	5	324	75	12	449	33	30	42	22	86	143	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frt		0.97			0.99			1.00	0.85	1.00	1.00	
Flt Protected		1.00			1.00			0.98	1.00	0.95	1.00	
Satd. Flow (prot)		3372			3392			1862	1468	1770	1845	
Flt Permitted		0.95			0.88			0.85	1.00	0.70	1.00	
Satd. Flow (perm)		3193			3003			1609	1468	1313	1845	
Peak-hour factor, PHF	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90	0.84	0.84	0.84
Adj. Flow (vph)	5	348	81	14	516	38	33	47	24	102	170	0
RTOR Reduction (vph)	0	16	0	0	5	0	0	0	14	0	0	0
Lane Group Flow (vph)	0	418	0	0	563	0	0	80	10	102	170	0
Heavy Vehicles (%)	0%	5%	0%	9%	5%	7%	0%	0%	10%	2%	3%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	6		
Actuated Green, G (s)		25.0			31.6			54.5	54.5	68.4	62.8	
Effective Green, g (s)		25.0			31.6			54.5	54.5	68.4	62.8	
Actuated g/C Ratio		0.19			0.24			0.42	0.42	0.53	0.48	
Clearance Time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		614			729			674	615	739	891	
v/s Ratio Prot										c0.01	c0.09	
v/s Ratio Perm		0.13			c0.19			0.05	0.01	0.06		
v/c Ratio		0.68			0.77			0.12	0.02	0.14	0.19	
Uniform Delay, d1		48.8			45.9			23.1	22.1	15.5	19.1	
Progression Factor		0.27			1.00			1.00	1.00	0.20	0.38	
Incremental Delay, d2		2.7			5.1			0.4	0.0	0.1	0.4	
Delay (s)		15.7			51.0			23.4	22.1	3.2	7.7	
Level of Service		B			D			C	C	A	A	
Approach Delay (s/veh)		15.7			51.0			23.1			6.0	
Approach LOS		B			D			C			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBR	NBT	SBL	SBT	Ø1	Ø3	Ø4	Ø7	Ø8
Lane Configurations									
Traffic Volume (vph)	78	1069	229	950					
Future Volume (vph)	78	1069	229	950					
Turn Type	Over	NA	Prot	NA					
Protected Phases	5	6	5	2	1	3	4	7	8
Permitted Phases									
Detector Phase	5	6	5	2					
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	11.0	24.0	11.0	24.0
Total Split (s)	21.0	53.0	21.0	62.0	12.0	12.0	44.0	19.0	37.0
Total Split (%)	16.2%	40.8%	16.2%	47.7%	9%	9%	34%	15%	28%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0					
Total Lost Time (s)	6.0	6.0	6.0	6.0					
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	13.9	54.5	13.9	64.0					
Actuated g/C Ratio	0.11	0.42	0.11	0.49					
v/c Ratio	0.11	0.56	0.67	0.59					
Control Delay (s/veh)	0.3	8.6	65.3	27.0					
Queue Delay	0.0	0.1	0.0	0.0					
Total Delay (s/veh)	0.3	8.6	65.3	27.0					
LOS	A	A	E	C					
Approach Delay (s/veh)		8.6		34.5					
Approach LOS		A		C					

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay (s/veh): 21.1	Intersection LOS: C
Intersection Capacity Utilization 37.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Northside Dr & Hemphill Ave



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	78	1069	0	229	950
Future Volume (vph)	0	78	1069	0	229	950
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2760	4988		3400	3505
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2760	4988		3400	3505
Peak-hour factor, PHF	0.69	0.69	0.92	0.92	0.94	0.94
Adj. Flow (vph)	0	113	1162	0	244	1011
RTOR Reduction (vph)	0	101	0	0	0	0
Lane Group Flow (vph)	0	12	1162	0	244	1011
Heavy Vehicles (%)	0%	3%	4%	0%	3%	3%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		13.9	54.5		13.9	62.8
Effective Green, g (s)		13.9	54.5		13.9	62.8
Actuated g/C Ratio		0.11	0.42		0.11	0.48
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		295	2091		363	1693
v/s Ratio Prot		0.00	0.23		c0.07	c0.29
v/s Ratio Perm						
v/c Ratio		0.04	0.56		0.67	0.60
Uniform Delay, d1		52.1	28.6		55.9	24.4
Progression Factor		1.00	0.26		1.00	1.00
Incremental Delay, d2		0.1	0.9		4.8	1.6
Delay (s)		52.1	8.2		60.7	26.0
Level of Service		D	A		E	C
Approach Delay (s/veh)	52.1		8.2			32.7
Approach LOS	D		A			C

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	11.6
Intersection LOS	B

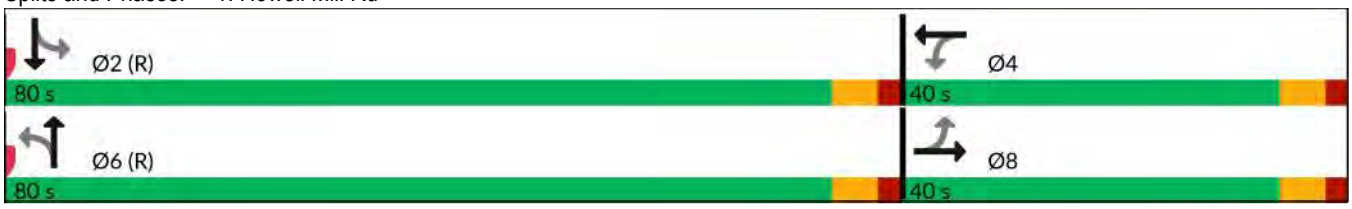
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	269	658	650
Demand Flow Rate, veh/h	286	684	679
Vehicles Circulating, veh/h	359	289	195
Vehicles Exiting, veh/h	614	585	450
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.2	13.9	11.2
Approach LOS	A	B	B

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
A (Intercept)	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	286	684	679
Cap Entry Lane, veh/h	957	1028	1131
Entry HV Adj Factor	0.941	0.962	0.957
Flow Entry, veh/h	269	658	650
Cap Entry, veh/h	900	988	1083
V/C Ratio	0.299	0.666	0.600
Control Delay, s/veh	7.2	13.9	11.2
LOS	A	B	B
95th %tile Queue, veh	1	5	4

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	113	61	15	63	3	302	25	648
Future Volume (vph)	113	61	15	63	3	302	25	648
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		8		4		6		2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	6	6	2	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
Total Split (s)	40.0	40.0	40.0	40.0	80.0	80.0	80.0	80.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	66.7%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)		23.0		23.0	85.0	85.0	85.0	85.0
Actuated g/C Ratio		0.19		0.19	0.71	0.71	0.71	0.71
v/c Ratio		0.81		0.35	0.01	0.27	0.04	0.56
Control Delay (s/veh)		68.8		38.3	7.3	7.7	5.0	6.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.1
Total Delay (s/veh)		68.8		38.3	7.3	7.7	5.0	6.9
LOS		E		D	A	A	A	A
Approach Delay (s/veh)		68.8		38.3		7.7		6.9
Approach LOS		E		D		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay (s/veh): 18.4	Intersection LOS: B
Intersection Capacity Utilization 64.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Howell Mill Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	61	7	15	63	24	3	302	13	25	648	63
Future Volume (veh/h)	113	61	7	15	63	24	3	302	13	25	648	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1900	1796	1900	1900	1900	1885	1900	1900	1885	1870
Adj Flow Rate, veh/h	128	69	8	17	72	28	3	347	15	26	668	65
Peak Hour Factor	0.88	0.88	0.88	0.87	0.87	0.87	0.87	0.87	0.87	0.97	0.97	0.97
Percent Heavy Veh, %	1	0	0	7	0	0	0	1	0	0	1	2
Cap, veh/h	193	83	9	58	202	71	600	1318	57	755	1242	121
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.73	0.73	0.73	1.00	1.00	1.00
Sat Flow, veh/h	875	502	56	142	1222	429	735	1794	78	1036	1691	165
Grp Volume(v), veh/h	205	0	0	117	0	0	3	0	362	26	0	733
Grp Sat Flow(s),veh/h/ln	1432	0	0	1794	0	0	735	0	1871	1036	0	1856
Q Serve(g_s), s	10.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	7.6	0.3	0.0	0.0
Cycle Q Clear(g_c), s	16.8	0.0	0.0	6.9	0.0	0.0	0.1	0.0	7.6	7.9	0.0	0.0
Prop In Lane	0.62		0.04	0.15		0.24	1.00		0.04	1.00		0.09
Lane Grp Cap(c), veh/h	285	0	0	331	0	0	600	0	1375	755	0	1363
V/C Ratio(X)	0.72	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.26	0.03	0.00	0.54
Avail Cap(c_a), veh/h	460	0	0	534	0	0	600	0	1375	755	0	1363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.83	0.00	0.83
Uniform Delay (d), s/veh	49.0	0.0	0.0	44.7	0.0	0.0	4.2	0.0	5.2	0.3	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.5	0.1	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	0.0	3.2	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.4	0.0	0.0	45.3	0.0	0.0	4.3	0.0	5.7	0.4	0.0	1.3
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		205			117			365			759	
Approach Delay, s/veh		52.4			45.3			5.7			1.2	
Approach LOS		D			D			A			A	

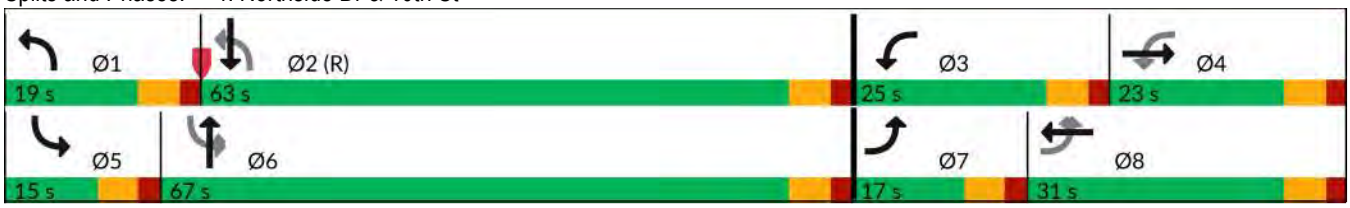
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		94.2		25.8		94.2		25.8				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		74.0		34.0		74.0		34.0				
Max Q Clear Time (g_c+I1), s		9.9		8.9		9.6		18.8				
Green Ext Time (p_c), s		6.3		0.6		2.4		1.0				

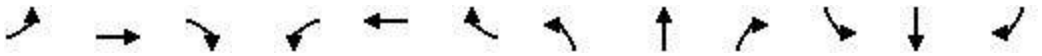
Intersection Summary	
HCM 7th Control Delay, s/veh	13.2
HCM 7th LOS	B

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	124	162	210	253	23	188	1364	275	81	1310
Future Volume (vph)	124	162	210	253	23	188	1364	275	81	1310
Turn Type	D.P+P	NA	D.P+P	NA	Perm	D.P+P	NA	Perm	D.P+P	NA
Protected Phases	7	4	3	8		1	6		5	2
Permitted Phases	8		4		8	2		6	6	
Detector Phase	7	4	3	8	8	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	5.0	4.0	5.0	4.0	4.0	5.0	4.0	4.0	5.0	4.0
Minimum Split (s)	11.0	22.0	11.0	22.0	22.0	11.0	22.0	22.0	11.0	22.0
Total Split (s)	17.0	23.0	25.0	31.0	31.0	19.0	67.0	67.0	15.0	63.0
Total Split (%)	13.1%	17.7%	19.2%	23.8%	23.8%	14.6%	51.5%	51.5%	11.5%	48.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	C-Max
Act Effct Green (s)	34.1	16.6	34.1	23.5	23.5	71.9	63.9	63.9	71.9	59.6
Actuated g/C Ratio	0.26	0.13	0.26	0.18	0.18	0.55	0.49	0.49	0.55	0.46
v/c Ratio	0.70	0.55	0.69	0.89	0.07	0.84	0.55	0.30	0.39	0.94
Control Delay (s/veh)	51.6	54.4	46.7	79.2	0.3	62.0	24.5	3.1	16.8	34.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	9.2
Total Delay (s/veh)	51.6	54.4	46.7	79.2	0.3	62.0	24.6	3.1	16.8	43.3
LOS	D	D	D	E	A	E	C	A	B	D
Approach Delay (s/veh)		53.3		61.4			25.2			41.9
Approach LOS		D		E			C			D

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay (s/veh): 38.4	Intersection LOS: D
Intersection Capacity Utilization 89.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Northside Dr & 10th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	162	37	210	253	23	188	1364	275	81	1310	97
Future Volume (veh/h)	124	162	37	210	253	23	188	1364	275	81	1310	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1856	1900	1870	1856	1900	1900	1885	1885	1870	1870	1900
Adj Flow Rate, veh/h	155	202	46	244	294	27	192	1392	0	87	1409	104
Peak Hour Factor	0.80	0.80	0.80	0.86	0.86	0.86	0.98	0.98	0.98	0.93	0.93	0.93
Percent Heavy Veh, %	0	3	0	2	3	0	0	1	1	2	2	0
Cap, veh/h	229	358	80	358	324	281	221	2674		254	1635	120
Arrive On Green	0.08	0.12	0.12	0.13	0.17	0.17	0.07	0.52	0.00	0.04	0.49	0.49
Sat Flow, veh/h	1810	2865	639	1781	1856	1610	1810	5147	1598	1781	3356	247
Grp Volume(v), veh/h	155	123	125	244	294	27	192	1392	0	87	743	770
Grp Sat Flow(s),veh/h/ln	1810	1763	1741	1781	1856	1610	1810	1716	1598	1781	1777	1826
Q Serve(g_s), s	9.0	8.5	8.8	15.3	20.2	1.8	6.8	23.2	0.0	3.0	48.0	48.6
Cycle Q Clear(g_c), s	9.0	8.5	8.8	15.3	20.2	1.8	6.8	23.2	0.0	3.0	48.0	48.6
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	229	220	217	358	324	281	221	2674		254	866	889
V/C Ratio(X)	0.68	0.56	0.58	0.68	0.91	0.10	0.87	0.52		0.34	0.86	0.87
Avail Cap(c_a), veh/h	229	231	228	380	357	310	276	2674		311	866	889
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	53.5	53.6	41.8	52.7	45.1	28.2	20.6	0.0	16.1	29.4	29.6
Incr Delay (d2), s/veh	7.8	2.7	3.3	4.1	23.1	0.1	20.9	0.2	0.0	0.8	10.8	11.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	3.9	4.0	7.1	11.4	0.7	4.1	9.1	0.0	1.2	22.3	23.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.6	56.2	56.9	45.9	75.8	45.2	49.1	20.7	0.0	16.9	40.2	40.6
LnGrp LOS	D	E	E	D	E	D	D	C		B	D	D
Approach Vol, veh/h		403			565			1584			1600	
Approach Delay, s/veh		53.5			61.4			24.2			39.1	
Approach LOS		D			E			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	69.3	23.4	22.2	10.8	73.5	17.0	28.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	57.0	19.0	17.0	9.0	61.0	11.0	25.0
Max Q Clear Time (g_c+I1), s	8.8	50.6	17.3	10.8	5.0	25.2	11.0	22.2
Green Ext Time (p_c), s	0.2	4.7	0.1	0.6	0.1	13.0	0.0	0.5

Intersection Summary	
HCM 7th Control Delay, s/veh	37.8
HCM 7th LOS	D

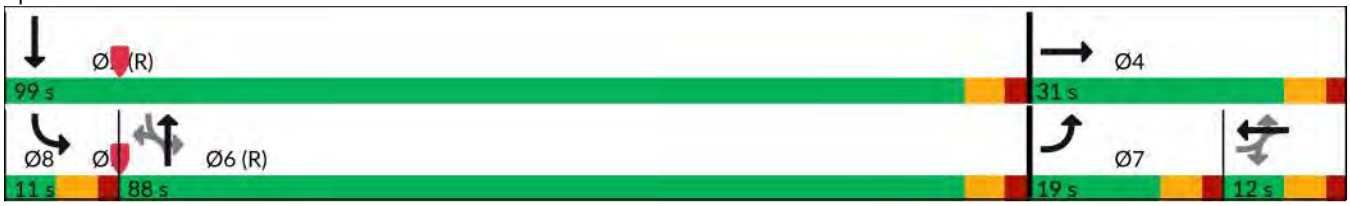
Notes

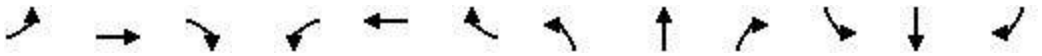
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	109	5	4	1	4	1523	29	1424
Future Volume (vph)	109	5	4	1	4	1523	29	1424
Turn Type	D.P+P	NA	Perm	NA	Perm	NA	D.P+P	NA
Protected Phases	7	4		8		6	5	2
Permitted Phases	8		8		6		6	
Detector Phase	7	4	8	8	6	6	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	11.0	24.0	24.0	11.0	24.0
Total Split (s)	19.0	31.0	12.0	12.0	88.0	88.0	11.0	99.0
Total Split (%)	14.6%	23.8%	9.2%	9.2%	67.7%	67.7%	8.5%	76.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0		6.0	6.0	6.0
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	16.9	21.7		5.8		89.7	92.7	96.3
Actuated g/C Ratio	0.13	0.17		0.04		0.69	0.71	0.74
v/c Ratio	0.63	0.39		0.51		0.76	0.20	0.67
Control Delay (s/veh)	61.0	30.4		33.9		10.1	5.1	5.3
Queue Delay	0.0	0.0		0.0		0.7	0.0	0.1
Total Delay (s/veh)	61.0	30.4		33.9		10.8	5.1	5.4
LOS	E	C		C		B	A	A
Approach Delay (s/veh)		46.8		33.9		10.8		5.4
Approach LOS		D		C		B		A

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBSB, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay (s/veh): 11.1	Intersection LOS: B
Intersection Capacity Utilization 68.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 11: Northside Dr & 11th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	5	89	4	1	34	4	1523	25	29	1424	87
Future Volume (veh/h)	109	5	89	4	1	34	4	1523	25	29	1424	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1900	1856	1900	1900	1900	1530	1885	1900	1900	1870	1870
Adj Flow Rate, veh/h	140	6	114	6	2	55	5	1731	28	33	1637	100
Peak Hour Factor	0.78	0.78	0.78	0.62	0.62	0.62	0.88	0.88	0.88	0.87	0.87	0.87
Percent Heavy Veh, %	2	0	3	0	0	0	25	1	0	0	2	2
Cap, veh/h	276	15	279	35	5	65	29	2298	37	191	2472	150
Arrive On Green	0.09	0.18	0.18	0.05	0.05	0.05	0.65	0.65	0.65	0.05	1.00	1.00
Sat Flow, veh/h	1781	81	1541	92	111	1401	2	3517	57	1810	3403	207
Grp Volume(v), veh/h	140	0	120	63	0	0	923	0	841	33	850	887
Grp Sat Flow(s),veh/h/ln	1781	0	1623	1604	0	0	1871	0	1705	1810	1777	1833
Q Serve(g_s), s	9.6	0.0	8.5	2.7	0.0	0.0	0.0	0.0	43.8	0.8	0.0	0.0
Cycle Q Clear(g_c), s	9.6	0.0	8.5	5.1	0.0	0.0	43.2	0.0	43.8	0.8	0.0	0.0
Prop In Lane	1.00		0.95	0.10		0.87	0.01		0.03	1.00		0.11
Lane Grp Cap(c), veh/h	276	0	294	104	0	0	1251	0	1114	191	1291	1332
V/C Ratio(X)	0.51	0.00	0.41	0.60	0.00	0.00	0.74	0.00	0.75	0.17	0.66	0.67
Avail Cap(c_a), veh/h	296	0	312	104	0	0	1251	0	1114	213	1291	1332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	0.50	0.50	0.50
Uniform Delay (d), s/veh	52.8	0.0	47.1	61.5	0.0	0.0	15.3	0.0	15.4	14.7	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.9	9.4	0.0	0.0	3.9	0.0	4.8	0.2	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	3.6	2.4	0.0	0.0	18.4	0.0	17.1	0.3	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	54.2	0.0	48.0	71.0	0.0	0.0	19.2	0.0	20.1	14.9	1.3	1.3
LnGrp LOS	D		D	E			B		C	B	A	A
Approach Vol, veh/h		260			63			1764			1770	
Approach Delay, s/veh		51.3			71.0			19.7			1.6	
Approach LOS		D			E			B			A	

Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		100.4		29.6	9.5	91.0	17.6	12.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		93.0		25.0	5.0	82.0	13.0	6.0				
Max Q Clear Time (g_c+I1), s		2.0		10.5	2.8	45.8	11.6	7.1				
Green Ext Time (p_c), s		24.2		0.5	0.0	18.8	0.0	0.0				

Intersection Summary												
HCM 7th Control Delay, s/veh			14.3									
HCM 7th LOS			B									

Intersection	
Intersection Delay, s/veh	22.7
Intersection LOS	C

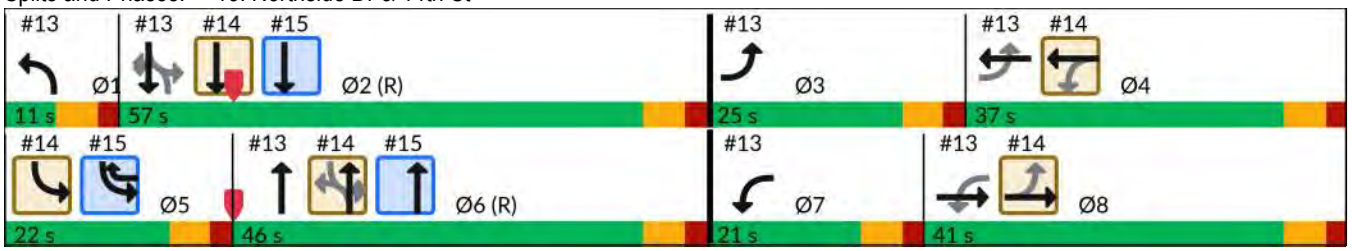
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	67	584	659	913
Demand Flow Rate, veh/h	68	591	669	927
Vehicles Circulating, veh/h	1157	586	273	340
Vehicles Exiting, veh/h	67	356	952	837
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	11.1	23.4	12.7	30.3
Approach LOS	B	C	B	D

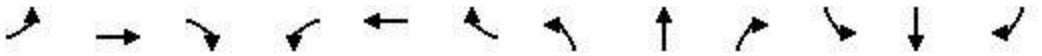
Lane	Left	Left	Left	Left	Bypass
Designated Moves	LTR	LTR	LTR	LT	R
Assumed Moves	LTR	LTR	LTR	LT	
RT Channelized					Yield
Lane Util	1.000	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	68	591	669	884	43
Cap Entry Lane, veh/h	424	759	1045	976	1289
Entry HV Adj Factor	0.985	0.988	0.985	0.988	0.926
Flow Entry, veh/h	67	584	659	873	40
Cap Entry, veh/h	418	750	1029	964	1193
V/C Ratio	0.160	0.779	0.640	0.906	0.034
Control Delay, s/veh	11.1	23.4	12.7	31.5	3.3
LOS	B	C	B	D	A
95th %tile Queue, veh	1	8	5	13	0

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR	Ø5
Lane Configurations										
Traffic Volume (vph)	69	229	230	407	78	1260	9	989	102	
Future Volume (vph)	69	229	230	407	78	1260	9	989	102	
Turn Type	D.P+P	NA	D.P+P	NA	D.P+P	NA	Perm	NA	Perm	
Protected Phases	3	8	7	4	1	6		2		5
Permitted Phases	4		8		2		2		2	
Detector Phase	3	8	7	4	1	6	2	2	2	
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.0	24.0	24.0	24.0	11.0	24.0	24.0	24.0	24.0	11.0
Total Split (s)	25.0	41.0	21.0	37.0	11.0	46.0	57.0	57.0	57.0	22.0
Total Split (%)	19.2%	31.5%	16.2%	28.5%	8.5%	35.4%	43.8%	43.8%	43.8%	17%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max	None
Act Effct Green (s)	50.0	35.6	50.0	40.7	56.0	43.2	51.0	51.0	51.0	
Actuated g/C Ratio	0.38	0.27	0.38	0.31	0.43	0.33	0.39	0.39	0.39	
v/c Ratio	0.38	0.37	0.58	0.82	0.65	0.85	0.19	0.85	0.18	
Control Delay (s/veh)	27.3	37.1	16.6	17.5	50.2	54.5	13.1	11.1	0.8	
Queue Delay	0.0	0.1	4.7	5.7	0.0	0.4	0.1	1.0	0.0	
Total Delay (s/veh)	27.3	37.2	21.2	23.1	50.2	55.0	13.2	12.1	0.8	
LOS	C	D	C	C	D	D	B	B	A	
Approach Delay (s/veh)		35.2		22.5		54.7		11.1		
Approach LOS		D		C		D		B		

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 32.4	Intersection LOS: C
Intersection Capacity Utilization 78.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 13: Northside Dr & 14th St





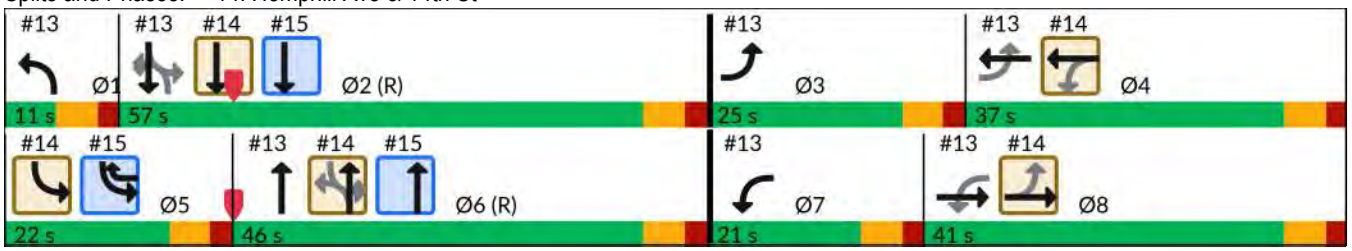
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	69	229	57	230	407	26	78	1260	103	9	989	102
Future Volume (vph)	69	229	57	230	407	26	78	1260	103	9	989	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.91		1.00	0.95	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1752	3421		1770	1848		1787	5032		1805	3539	1568
Flt Permitted	0.18	1.00		0.47	1.00		0.08	1.00		0.08	1.00	1.00
Satd. Flow (perm)	325	3421		869	1848		148	5032		149	3539	1568
Peak-hour factor, PHF	0.81	0.81	0.81	0.91	0.91	0.91	0.95	0.95	0.95	0.84	0.84	0.84
Adj. Flow (vph)	85	283	70	253	447	29	82	1326	108	11	1177	121
RTOR Reduction (vph)	0	17	0	0	1	0	0	7	0	0	0	74
Lane Group Flow (vph)	85	336	0	253	475	0	82	1427	0	11	1177	47
Heavy Vehicles (%)	3%	2%	4%	2%	2%	0%	1%	2%	1%	0%	2%	3%
Turn Type	D.P+P	NA		D.P+P	NA		D.P+P	NA		Perm	NA	Perm
Protected Phases	3	8		7	4		1	6			2	
Permitted Phases	4			8			2			2		2
Actuated Green, G (s)	50.0	35.6		50.0	40.7		56.0	43.2		51.0	51.0	51.0
Effective Green, g (s)	50.0	35.6		50.0	40.7		56.0	43.2		51.0	51.0	51.0
Actuated g/C Ratio	0.38	0.27		0.38	0.31		0.43	0.33		0.39	0.39	0.39
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	227	936		434	578		126	1672		58	1388	615
v/s Ratio Prot	0.03	0.10		c0.06	c0.26		c0.02	0.28			c0.33	
v/s Ratio Perm	0.12			0.16			0.25			0.07		0.03
v/c Ratio	0.37	0.36		0.58	0.82		0.65	0.85		0.19	0.85	0.08
Uniform Delay, d1	28.8	38.0		28.8	41.3		27.9	40.5		25.9	36.0	24.8
Progression Factor	1.00	1.00		0.53	0.22		1.70	1.25		0.33	0.21	0.13
Incremental Delay, d2	1.0	0.2		1.0	4.8		7.7	3.9		3.6	3.5	0.1
Delay (s)	29.8	38.3		16.4	13.8		55.0	54.4		12.1	10.9	3.5
Level of Service	C	D		B	B		E	D		B	B	A
Approach Delay (s/veh)		36.6			14.7			54.5			10.2	
Approach LOS		D			B			D			B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	Ø1	Ø3	Ø7
Lane Configurations												
Traffic Volume (vph)	4	275	29	661	53	183	34	26	143			
Future Volume (vph)	4	275	29	661	53	183	34	26	143			
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	D.P+P	NA			
Protected Phases		8		4		6		5	2	1	3	7
Permitted Phases	8		4		6		6	6				
Detector Phase	8	8	4	4	6	6	6	5	2			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	28.0	24.0
Total Split (s)	41.0	41.0	37.0	37.0	46.0	46.0	46.0	22.0	57.0	11.0	25.0	21.0
Total Split (%)	31.5%	31.5%	28.5%	28.5%	35.4%	35.4%	35.4%	16.9%	43.8%	8%	19%	16%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0			
Total Lost Time (s)		6.0		6.0		6.0	6.0	6.0	6.0			
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lag	Lead	Lag	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max	None	None	None
Act Effct Green (s)		35.6		40.7		43.2	43.2	56.0	51.0			
Actuated g/C Ratio		0.27		0.31		0.33	0.33	0.43	0.39			
v/c Ratio		0.48		0.87		0.59	0.08	0.08	0.25			
Control Delay (s/veh)		19.4		53.4		42.0	0.2	2.6	8.1			
Queue Delay		1.0		0.4		1.2	0.0	0.0	0.0			
Total Delay (s/veh)		20.4		53.8		43.2	0.2	2.6	8.1			
LOS		C		D		D	A	A	A			
Approach Delay (s/veh)		20.4		53.8		37.8			7.3			
Approach LOS		C		D		D			A			

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 37.5	Intersection LOS: D
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 14: Hemphill Ave & 14th St



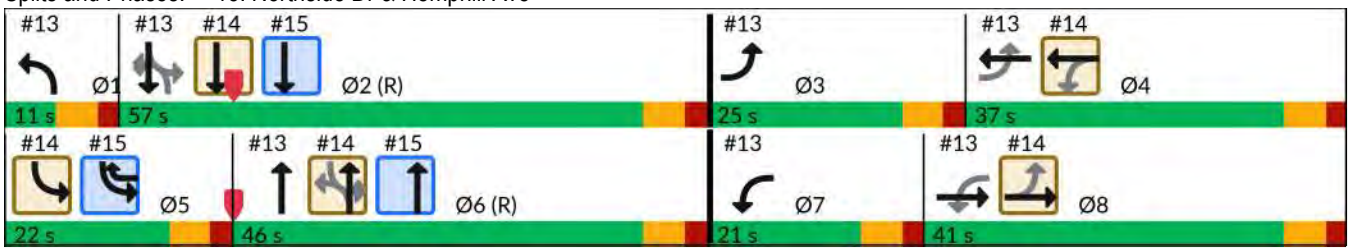
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	275	82	29	661	75	53	183	34	26	143	0
Future Volume (vph)	4	275	82	29	661	75	53	183	34	26	143	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		0.95			0.95			1.00	1.00	1.00	1.00	
Frt		0.97			0.99			1.00	0.85	1.00	1.00	
Flt Protected		1.00			1.00			0.99	1.00	0.95	1.00	
Satd. Flow (prot)		3378			3461			1862	1524	1805	1881	
Flt Permitted		0.94			0.88			0.88	1.00	0.39	1.00	
Satd. Flow (perm)		3190			3052			1654	1524	748	1881	
Peak-hour factor, PHF	0.85	0.85	0.85	0.91	0.91	0.91	0.73	0.73	0.73	0.79	0.79	0.79
Adj. Flow (vph)	5	324	96	32	726	82	73	251	47	33	181	0
RTOR Reduction (vph)	0	20	0	0	5	0	0	0	31	0	0	0
Lane Group Flow (vph)	0	405	0	0	835	0	0	324	16	33	181	0
Heavy Vehicles (%)	0%	3%	4%	0%	3%	0%	4%	0%	6%	0%	1%	0%
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	D.P+P	NA	
Protected Phases		8			4			6		5	2	
Permitted Phases	8			4			6		6	6		
Actuated Green, G (s)		35.6			40.7			43.2	43.2	56.0	51.0	
Effective Green, g (s)		35.6			40.7			43.2	43.2	56.0	51.0	
Actuated g/C Ratio		0.27			0.31			0.33	0.33	0.43	0.39	
Clearance Time (s)		6.0			6.0			6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		873			955			549	506	426	737	
v/s Ratio Prot										c0.01	c0.10	
v/s Ratio Perm		0.13			c0.27			c0.20	0.01	0.03		
v/c Ratio		0.46			0.87			0.59	0.03	0.08	0.25	
Uniform Delay, d1		39.3			42.2			36.0	29.3	22.1	26.6	
Progression Factor		0.48			1.00			1.00	1.00	0.12	0.28	
Incremental Delay, d2		0.4			8.9			4.6	0.1	0.1	0.7	
Delay (s)		19.1			51.2			40.7	29.4	2.8	8.0	
Level of Service		B			D			D	C	A	A	
Approach Delay (s/veh)		19.1			51.2			39.2			7.2	
Approach LOS		B			D			D			A	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	36.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBR	NBT	SBL	SBT	Ø1	Ø3	Ø4	Ø7	Ø8
Lane Configurations									
Traffic Volume (vph)	269	1363	181	1104					
Future Volume (vph)	269	1363	181	1104					
Turn Type	Over	NA	Prot	NA					
Protected Phases	5	6	5	2	1	3	4	7	8
Permitted Phases									
Detector Phase	5	6	5	2					
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	28.0	24.0	24.0	24.0
Total Split (s)	22.0	46.0	22.0	57.0	11.0	25.0	37.0	21.0	41.0
Total Split (%)	16.9%	35.4%	16.9%	43.8%	8%	19%	28%	16%	32%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0					
Total Lost Time (s)	6.0	6.0	6.0	6.0					
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	12.8	43.2	12.8	51.0					
Actuated g/C Ratio	0.10	0.33	0.10	0.39					
v/c Ratio	0.27	0.85	0.60	0.89					
Control Delay (s/veh)	2.2	18.5	63.2	46.5					
Queue Delay	0.0	0.7	0.0	0.2					
Total Delay (s/veh)	2.2	19.3	63.2	46.7					
LOS	A	B	E	D					
Approach Delay (s/veh)		19.3		49.0					
Approach LOS		B		D					

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 120	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay (s/veh): 30.9	Intersection LOS: C
Intersection Capacity Utilization 45.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Northside Dr & Hemphill Ave



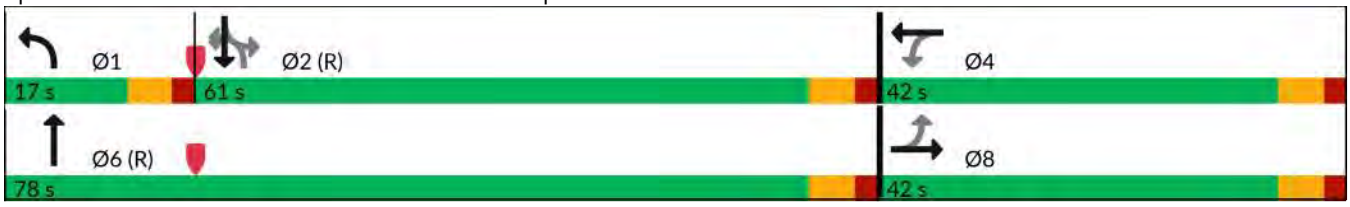
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	269	1363	0	181	1104
Future Volume (vph)	0	269	1363	0	181	1104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0		6.0	6.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2814	5085		3467	3539
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2814	5085		3467	3539
Peak-hour factor, PHF	0.82	0.82	0.95	0.95	0.89	0.89
Adj. Flow (vph)	0	328	1435	0	203	1240
RTOR Reduction (vph)	0	296	0	0	0	0
Lane Group Flow (vph)	0	32	1435	0	203	1240
Heavy Vehicles (%)	0%	1%	2%	0%	1%	2%
Turn Type		Over	NA		Prot	NA
Protected Phases		5	6		5	2
Permitted Phases						
Actuated Green, G (s)		12.8	43.2		12.8	51.0
Effective Green, g (s)		12.8	43.2		12.8	51.0
Actuated g/C Ratio		0.10	0.33		0.10	0.39
Clearance Time (s)		6.0	6.0		6.0	6.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		277	1689		341	1388
v/s Ratio Prot		0.01	0.28		c0.06	c0.35
v/s Ratio Perm						
v/c Ratio		0.12	0.85		0.60	0.89
Uniform Delay, d1		53.4	40.4		56.1	37.0
Progression Factor		1.00	0.36		1.00	1.00
Incremental Delay, d2		0.1	3.1		2.8	9.1
Delay (s)		53.6	17.6		58.9	46.1
Level of Service		D	B		E	D
Approach Delay (s/veh)	53.6		17.6			47.9
Approach LOS	D		B			D

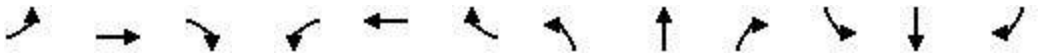
Intersection Summary			
HCM 2000 Control Delay (s/veh)	34.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	259	1	3	9	245	448	2	570	245
Future Volume (vph)	259	1	3	9	245	448	2	570	245
Turn Type	Perm	NA	Perm	NA	D.P+P	NA	Perm	NA	Perm
Protected Phases		8		4	1	6		2	
Permitted Phases	8		4		2		2		2
Detector Phase	8	8	4	4	1	6	2	2	2
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Total Split (s)	42.0	42.0	42.0	42.0	17.0	78.0	61.0	61.0	61.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	14.2%	65.0%	50.8%	50.8%	50.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	30.3	30.3		30.3	71.7	77.7		59.4	59.4
Actuated g/C Ratio	0.25	0.25		0.25	0.60	0.65		0.50	0.50
v/c Ratio	0.86	0.47		0.05	0.72	0.44		0.69	0.31
Control Delay (s/veh)	64.6	6.4		21.7	23.4	12.8		29.5	7.3
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0
Total Delay (s/veh)	64.6	6.4		21.7	23.4	12.8		29.5	7.3
LOS	E	A		C	C	B		C	A
Approach Delay (s/veh)		36.4		21.7		16.5		22.8	
Approach LOS		D		C		B		C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBSB and 6:NBT, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay (s/veh): 24.0	Intersection LOS: C
Intersection Capacity Utilization 90.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 16: Howell Mill Rd & Huff Rd/Hemphill Ave





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	259	1	242	3	9	8	245	448	9	2	570	245
Future Volume (veh/h)	259	1	242	3	9	8	245	448	9	2	570	245
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1900	1856	1900	1900	1707	1856	1856	1900	1900	1870	1856
Adj Flow Rate, veh/h	301	1	281	3	10	9	282	515	10	2	633	272
Peak Hour Factor	0.86	0.86	0.86	0.93	0.93	0.93	0.87	0.87	0.87	0.90	0.90	0.90
Percent Heavy Veh, %	1	0	3	0	0	13	3	3	0	0	2	3
Cap, veh/h	346	2	482	68	214	172	332	1088	21	31	856	721
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.09	0.60	0.60	0.46	0.46	0.46
Sat Flow, veh/h	1404	6	1605	112	714	572	1767	1814	35	1	1868	1572
Grp Volume(v), veh/h	301	0	282	22	0	0	282	0	525	635	0	272
Grp Sat Flow(s),veh/h/ln	1404	0	1611	1398	0	0	1767	0	1849	1869	0	1572
Q Serve(g_s), s	18.1	0.0	17.8	0.1	0.0	0.0	10.3	0.0	19.0	0.0	0.0	13.6
Cycle Q Clear(g_c), s	36.0	0.0	17.8	17.9	0.0	0.0	10.3	0.0	19.0	33.4	0.0	13.6
Prop In Lane	1.00		1.00	0.14		0.41	1.00		0.02	0.00		1.00
Lane Grp Cap(c), veh/h	346	0	483	454	0	0	332	0	1110	887	0	721
V/C Ratio(X)	0.87	0.00	0.58	0.05	0.00	0.00	0.85	0.00	0.47	0.72	0.00	0.38
Avail Cap(c_a), veh/h	346	0	483	454	0	0	332	0	1110	887	0	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.0	0.0	35.6	29.9	0.0	0.0	22.9	0.0	13.4	26.7	0.0	21.3
Incr Delay (d2), s/veh	20.6	0.0	1.8	0.0	0.0	0.0	18.4	0.0	1.4	4.9	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.0	0.0	7.1	0.5	0.0	0.0	5.7	0.0	7.9	15.6	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	67.5	0.0	37.4	30.0	0.0	0.0	41.3	0.0	14.9	31.6	0.0	22.8
LnGrp LOS	E		D	C			D		B	C		C
Approach Vol, veh/h		583			22			807			907	
Approach Delay, s/veh		53.0			30.0			24.1			28.9	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	17.0	61.0		42.0		78.0		42.0				
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s	11.0	55.0		36.0		72.0		36.0				
Max Q Clear Time (g_c+I1), s	12.3	35.4		19.9		21.0		38.0				
Green Ext Time (p_c), s	0.0	5.1		0.0		3.7		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	33.3
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	487	777	849
Demand Flow Rate, veh/h	497	792	866
Vehicles Circulating, veh/h	528	204	297
Vehicles Exiting, veh/h	468	959	728
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	14.7	14.3	24.2
Approach LOS	B	B	C

Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
A (Intercept)	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	497	792	866
Cap Entry Lane, veh/h	805	1121	1019
Entry HV Adj Factor	0.980	0.981	0.980
Flow Entry, veh/h	487	777	849
Cap Entry, veh/h	789	1099	999
V/C Ratio	0.617	0.707	0.850
Control Delay, s/veh	14.7	14.3	24.2
LOS	B	B	C
95th %tile Queue, veh	4	6	11

APPENDIX G

GRTA LETTER OF UNDERSTANDING (LOU)

LETTER OF UNDERSTANDING

April 15th, 2025

Alex May
Animal Group
52 Helena Avenue
Atlanta, GA 30314

RE: **981 Howell Mill Road Mixed-Use Development** (**DRI#: 4367)**

Dear Alex May:

The purpose of this Letter of Understanding is to document the discussions during the Methodology Meeting held virtually on March 3rd, 2025 regarding **981 Howell Mill Road Mixed-Use** Development of Regional Impact (DRI). The *GRTA DRI Review Procedures*, as well as the inputs and parameters documented in this Letter of Understanding and the revised Methodology Meeting Packet, shall be adhered to in preparing the GRTA required Transportation Study.

PROJECT OVERVIEW

- The proposed site is located at 33°46'54.37"N 84°24'37.81"W(33.781769°,-84.410502°)
- The proposed development includes 697 high-rise apartments, 54,380 square feet of commercial space, and a 330-room hotel,130 rooms of which will be set apart for short term rentals.
- The projected build-out is one phase to be completed by 2030.
- The proposed development includes (3) site accesses along Edgehill Avenue, 10th Street and Watkins Street.
- The DRI trigger for this development is a Special Use Permit
- The vehicular trip generation is estimated to be 7,212 net daily trips based on the *ITE Trip Generation Manual 11th edition.*
- The applicant is applying for approval under GRTA's non-expedited Transportation Impact Study review process.

STUDY NETWORK

1. Howell Mill Rd & 8th St
2. Howell Mill Rd & 10th St
3. 10th St & Watkins St
4. 10th St & Northside Dr
5. 10th St & Hemphill Ave
6. Howell Mill Rd & Edgehill Ave
7. Edgehill Ave & Bellingrath Ave
8. Edgehill Ave & Watkins St
9. Howell Mill Rd & 11th St
10. 11th St & Bellingrath Ave
11. Northside Dr & 11th St
12. Howell Mill Rd & 14th St
13. Northside Dr & 14th St
14. 4th St & Hemphill Ave
15. Northside Dr & Hemphill Ave
16. Howell Mill Rd & Huff Rd

17. Howell Mill Rd & 17th St
18. Driveway A at Edgehill Avenue
19. Driveway B at 10th Street
20. Driveway C at Watkins Street

METHODOLOGY MEETING PACKET INPUTS & PARAMETERS

- The Site Plan shall meet all the applicable requirements in Section 7.1 of the *GRTA DRI Review Procedures*.

- All Study Network intersections shall be analyzed during the AM and PM peak hours for (1) existing conditions, (2) future "no-build" conditions, and (3) future "build" conditions as specified in the *GRTA DRI Review Procedures*.

- This DRI shall be modeled and reviewed in one phase to be completed by 2030.

- The Level of Service (LOS) standard for all analysis shall be LOS D unless specified otherwise in Section 3.2.2.1. For example, a LOS E standard is allowed if the existing LOS for the intersection or approach is a LOS F.

- Default values should not be assumed in the traffic modeling. Existing conditions shall be taken into account as required in Section 3.2.2.

- The trip generation calculations in the revised Methodology Meeting Packet shall be used in the Transportation Study. Mixed-use and pass-by reductions are allowed for this site. Pass-by reductions shall not exceed 15% of a roadway's traffic volume standard established in Appendix 7.2.

- The trip assignment approach in the revised Methodology Meeting Packet shall be utilized for all Study Network intersection movements.

- The applicant shall research TIP, STIP, RTP and GDOT's construction work program, as well as any local government and transit operator plans (SPLOST, CIP, etc.), to determine the open date, sponsor, cost of the project, funding source(s), for future roadway projects in the project vicinity. Programmed transportation projects anticipated to open on or before the Build Out year of the DRI Project shall be modeled as completed in the No-Build and Build conditions unless approved otherwise.

- A 1.0% annual traffic Background Growth Rate shall be used for all roadways.

- Capacity analysis shall be based on turning movement counts collected not more than 12-months prior to the date of the actual DRI submittal to GRTA, unless specified otherwise. As specified in Section 2.3, turning movement counts shall be collected while local schools are in session, on a Tuesday, Wednesday or Thursday (unless approved otherwise) and not during holiday periods (weeks of July 4th, Thanksgiving and +/- 5 days of Christmas).

- COVID-19: The transportation analysis shall utilize existing turning movement count data when available during COVID. All counts older than a year shall be grown by the Background Growth Rate unless approved otherwise. If new counts are required, a control count location where existing count data is available shall be used for developing traffic growth extrapolation rates. The traffic engineer shall submit the proposed growth rates to GRTA, GDOT and local government stakeholders for input and GRTA approval before submitting the Transportation Study.

- If the *GRTA DRI Review Procedures* requires an Enhanced Focus Area for Heavy Vehicles or an Enhanced Focus Area for Dense Urban Environments, the Transportation Study shall incorporate the inputs and parameters agreed to at the Methodology Meeting and documented in the revised Methodology Meeting Packet. These inputs may include a Heavy Vehicle modeling percentages, a Heavy Vehicle route map, a pedestrian crosswalk delay adjustment and a bus blockage adjustment factor.

ADDITIONAL REQUIREMENTS

All applicable requirements of the *GRTA DRI Review Procedures* must be met for the Transportation Study to be considered complete. The *GRTA DRI Review Procedures* are located on GRTA's DRI website: https://www.srta.ga.gov/programs-projects/dev-of-regional-impact/ Contact GRTA staff if you have any questions on these requirements.

The Transportation Study shall also include as attachments the native LOS modeling file (i.e., Synchro modeling files) as well as the modeling reports (PDFs) for all Study Network intersections for the Existing, No-Build and Build conditions for all phases. The PDF reports shall be numbered (in page headers) and organized in order according to the Study Network numbering sequence in this Letter of Understanding. The reports shall also be organized in the following sequence: *Existing condition AM, Existing condition PM, No-build condition AM, No-Build condition PM, Build condition AM, Build condition PM*. If improvements are modeled, those PDFs shall be labeled as such and follow the appropriate condition's applicable peak period.

The Transportation Study appendices shall also include all turning movement count data, regardless of if using historic data or newly collected turning movement counts.

When documenting any Queue Length impacts required in Section 3.2.3.6, the TIS Executive Summary shall also note any individual *movements* not meeting the LOS standard where the DRI Project adds trips in the Build condition and exceeds available storage capacity for that movement.

When identifying mitigations in the existing, no-build and build conditions, the mitigations identified in preceding conditions shall not be modeled as complete when conducting the LOS analysis. The same mitigation may still be proposed as mitigation in the subsequent condition but it shall not be included as completed in the default analysis. For example, a turn lane may be identified as a needed improvement in the no-build condition. The turn lane should not be modeled as completed in the build condition. The turn lane should only be modeled as complete in the no-build with improvements condition and the build with improvements condition.

DRI REVIEW PACKAGE SUBMITTAL

GRTA will begin reviewing the DRI once the DRI Review Package is submitted and deemed complete. The DRI Review Package includes: the permitting Local Government inputting both Department of Community Affairs (DCA) forms into the DCA DRI website; and the **Traffic Engineer submittal of the GRTA Transportation Study (including LOS appendices, traffic count data and any other required attachments) and Site Plan to GRTA staff and ALL stakeholders included in the CC list of this Letter of Understanding**.

All DRI Review Packages shall be submitted electronically via email to all stakeholders in the CC list of the Letter of Understanding. If the DRI Review Package total file size is greater than 10 MB, the DRI Review Package shall be submitted via email with a FTP link provided for downloading the files.

Please contact me if you have any questions about the Letter of Understanding or the *GRTA DRI Review Procedures*.

Sincerely,

Derrick A. Peevy Jr. AICP
DRI Planner
SRTA/GRTA

Cc:

Zane Grennell, DCA
Brittany Williams SRTA/GRTA/ATL
Derrick Peevy SRTA/GRTA/ATL
Donald Shockey ARC
Local Government(s)
Megan Wilson GDOT
Erika Becker, NV5
Josh Pruitt, NV5
Alex May, Animal Group
Robert Barcliff, Barcliff Consulting

Landon Perry GDOT
Adeline Collot, Upper Wes Side ATL CID
Sidney Douse III, MARTA