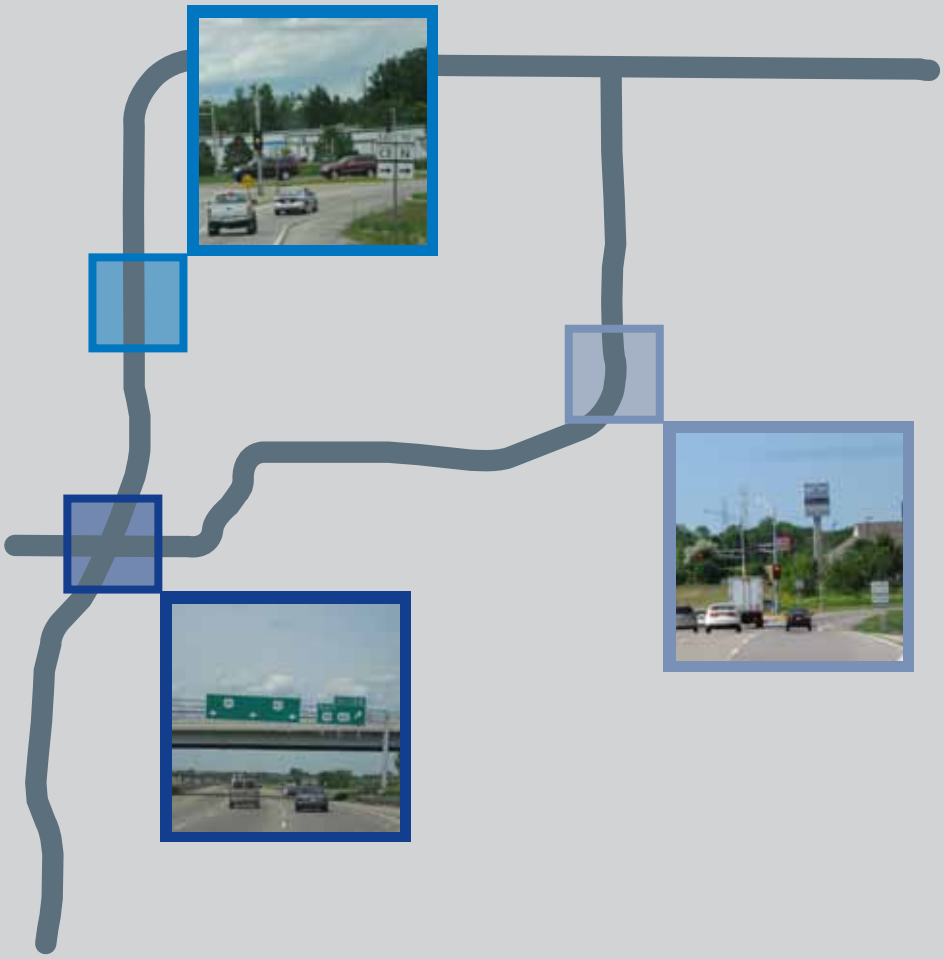


OPERATIONAL NEEDS ASSESSMENT

US 41 (CTH JJ/WIS 114 to CTH S) and WIS 441

APPENDICES

FINAL REPORT

NOVEMBER 2011

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Appendix M	Rodel Report
Appendix N	Crash Benefit Analysis

Appendix J

Backbone Interchange Reports for WIS 47, WIS 96 & WIS 125

USH 41 and STH 47
Outagamie County
Interchange Study Report



Backbone Interchange Needs and Improvement Study

Prepared for:

Wisconsin Department of Transportation
Northeast Region and
Division of Transportation Investment Management
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Earth Tech Project No. 91355

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USH 41 AND STH 47 INTERCHANGE SUMMARY

INTRODUCTION

This report presents the results of a comprehensive evaluation of the USH 41 and STH 47 (Richmond Street) interchange in Outagamie County. A project location map is in Exhibit 3. The scope of the USH 41 and STH 47 interchange project study was to analyze the existing conditions and future needs, and identify improvement alternatives to address the needs.

The USH 41 and STH 47 interchange study is part of the overall Backbone Interchange Needs and Improvement Study (Backbone Study) which will include an evaluation of 25 interchanges on the Non-Southeast Corridors 2020 Backbone System. The study was completed for the WisDOT Bureau of State Highway Programs (BSHP) in the Division of Transportation Investment Management and the WisDOT Northeast Region. The purpose of the overall study is to assist the WisDOT Backbone Programming Committee in determining future interchange programming needs and prioritizing interchange improvement projects.

DEFICIENCY ANALYSIS

The existing USH 41 and STH 47 interchange was reviewed and analyzed for traffic operational, safety, geometric, and structural deficiencies. The ramp terminals are operating at LOS B and C. The interchange ramp junctions are currently operating at LOS C or D. By 2020 the westbound merge will operate at LOS E during the AM peak. By 2035 the four merge and diverge locations will be operating at either LOS E or F. USH 41 is currently operating at LOS D both east and west of STH 47. The LOS on USH 41 will deteriorate to LOS E by 2020 and LOS F by 2035.

There is an average of 25 crashes annually associated with the interchange. The worst crash locations are the westbound diverge and westbound ramps, with approximately 4.0 and 9.2 annual average crashes, respectively, and crash rates of 90 and 1.23, respectively. A summary of the existing geometric and operational deficiencies and the crash data are in Exhibits 9 and 10.

The interchange has several geometric deficiencies, the most significant being bridge related. The eastbound on-ramp's acceleration taper is 600 feet less than desirable and has a sag vertical curve less than the design speed. STH 47 has major access spacing deficiencies to both the north and south. The worst accesses are a private access point 200 feet south of the eastbound ramp terminal, and the Association Drive intersection 400 feet south of the eastbound ramp terminal. Both ramp terminals have no left turn lane on STH 47. The dual left turn lanes on both off-ramps are deficient in both width and length.

Both bridges that carry STH 47 over USH 41 have sufficiency ratings of 78. The bridges have deficient vertical clearance and clear widths. The vertical clearances range from 15.05 feet to 15.4 feet. The clear width of the structures is 30 feet. The bridges are programmed to be raised in 2010.

ALTERNATIVES

Earth Tech and the WisDOT Northeast Region jointly explored several possible alternatives and developed one short-term alternative and two long-term alternatives for further evaluation in accordance with the Backbone Study criteria. Earth Tech completed operational and safety

analysis and developed cost estimates for these alternatives consistent with the approach used on all other interchanges in the Backbone Study. A summary of the alternatives layouts and evaluation is in Exhibit 1. A cost estimate summary is in Exhibit 2.

The Northeast Region will be raising the bridges in 2010 to remove the clearance deficiency.

Short-Term Alternative 1: Improvements - $3,120,000

Short-Term Alternative 1 improves the deficient merge and diverge operations and better defines the turning movements experienced at the interchange ramp terminals. Short-Term Alternative 1 (shown on Exhibit 6) includes:

- Extending the eastbound diverge deceleration lane 1,100 feet and the eastbound merge acceleration lane 600 feet.
- Extending the westbound diverge deceleration lane 1,000 feet and the westbound merge acceleration lane 800 feet.
- Widening and extending off ramp left turn lanes at both ramp terminals.

Advantages

- Improves safety and operations at ramp terminals.
- Improves operations of merge and diverge locations.
- Improvements are compatible with long-term alternatives.

Disadvantages

- Does not address long-term bridge needs. Bridges will be raised in 2010 and there are no other short-term bridge needs.
- Does not address STH 47 left turn lane safety concerns.
- Does not address access spacing deficiencies.

Long-Term Alternative 2: Improvements - $7,900,000

Long-Term Alternative 2 fully addresses current and projected operational and safety concerns at the interchange except for providing bridges that will accommodate 6 lanes on USH 41. The alternate redecks and widens the bridges. Long-Term Alternative 2 (shown on Exhibit 7) includes:

- Diverge deceleration and merge acceleration extensions from Short-Term Alternative 1.
- Reconstruction of the ramp terminal intersections into two lane roundabouts with right turn bypass lanes where needed.
- Redeck and widen the existing bridges 6 feet.

- Convert the STH 47 mountable median to a raised median from W. Evergreen Drive south to Capitol Drive to restrict access.

Advantages

- Fully addresses the operational and safety deficiencies through 2035.
- Can be constructed with current bridges.

Disadvantages

- Does not provide room under bridges for future 6 lanes on USH 41.

Long-Term Alternative 3: Improvements - $9,200,000

Long-Term Alternative 3 fully addresses operational and safety concerns currently experienced at the interchange, including bridge replacements to meet design standards and provide for 6 lanes on USH 41. Long-Term Alternative 3 (shown in Exhibit 8) includes:

- Diverge deceleration and merge acceleration extensions from Short-Term Alternative 1.
- Convert the STH 47 mountable median to a raised median from Long-Term Alternative 2.
- Reconstruction of STH 47 through the interchange to have four through lanes plus single right turn lanes and left turn lanes at the ramp terminal intersections.
- Provide 350-foot dual left and single right turn lanes for the off-ramps at the westbound and eastbound ramp terminals.
- Reconstruction of all on-ramps to provide 250-foot dual lanes.
- Replace existing bridges with new structures that will accommodate 6 lanes over USH 41.

Advantages

- Fully addresses the operational and safety deficiencies through 2035.
- New bridges accommodate future USH 41 6-lane expansion.

Disadvantages

- Overall LOS less than Long-Term Alternative 2.

USH 41 AND STH 47 INTERCHANGE STUDY
OUTAGAMIE COUNTY

STUDY OVERVIEW

This report presents the results of a comprehensive operational evaluation of the USH 41 and STH 47 interchange located in the Town of Grand Chute, Outagamie County, Wisconsin. The study area for this interchange includes USH 41 from ½ mile west of STH 47 to ½ mile east of STH 47 and STH 47 (Richmond Street) from Evergreen Drive south to Capitol Drive.

USH 41 is a WisDOT Corridors 2020 Backbone route. STH 47 is a rural minor arterial in the Appleton urbanized area. USH 41 is constructed as a freeway and STH 47 is constructed as a four lane divided urban street.

This interchange evaluation is part of the Backbone Interchange Needs and Improvement Study (Backbone Study) initiated by the Wisconsin Department of Transportation (WisDOT) Backbone Programming Committee. The study was completed for the WisDOT Bureau of State Highway Programs (BSHP) in the Division of Transportation Investment Management and the Northeast Region. The purpose of the overall study is to assist the WisDOT Backbone Programming Committee in determining future interchange programming needs and prioritizing interchange improvement projects on the Non-Southeast Corridors 2020 Backbone System.

Each WisDOT Region identified existing interchanges and future interchange locations for evaluation in the overall project. Earth Tech evaluated each of the 25 interchanges using a standard process to provide consistent results across diverse geographic and functional interchanges. For each interchange the evaluation included:

- Inventory and evaluation of the existing interchanges, including mainline highway, cross roads, and bridges
- Operational analysis of existing and forecasted traffic conditions
- Identification of existing operational, geometric, and safety deficiencies
- Development and evaluation of alternatives to address deficiencies and future traffic needs
- Development of detailed cost estimates for each alternative
- Providing evaluation data to WisDOT for use in prioritizing the interchange projects
- Coordinating with the WisDOT Region throughout the study

After completion of the individual interchange evaluations, BSHP will score each interchange and present the information to the Backbone Programming Committee for review, prioritization, and programming of future interchange improvement projects. The study was a planning level study and did not include detailed geometric design, detailed environmental evaluation, or public involvement.

INTERCHANGE ANALYSIS APPROACH

The standard interchange analysis methodology used for all interchanges in the Backbone Study is described in detail in Appendix A. Earth Tech and the WisDOT NE Region jointly explored several possible alternatives and developed one short-term alternative and two long-term alternatives for further evaluation in accordance with the Backbone Study criteria.

Earth Tech performed an independent evaluation of the three alternatives for the USH 41 and STH 47 study that included the following:

- Perform operational analysis on the interchange merge, diverge, and ramp terminal areas for no-build and each alternative. The years analyzed include existing, 2020, and 2035.
- Complete crash analyses for the interchange merge, diverge, and ramp terminal influence areas for years 2000 to 2004.
- Determine geometric deficiencies for the freeway, ramps, and ramp terminal segments using as-built plans provided by WisDOT.
- Provide cost estimates using the Backbone Study cost estimating methodology.
- Develop crash benefits for each alternative and provide an estimated crash reduction assuming existing crash rates.

The Backbone Study included extensive coordination with the WisDOT regions. Project meeting minutes are in Appendix J.

DEFICIENCY ANALYSIS OF EXISTING SYSTEM

A summary of the existing geometric, safety and operational deficiencies is in Exhibit 9. Exhibit 10 shows specific geometric deficiencies. Data used for the interchange deficiency analysis is in Appendix B.

Traffic Forecasts

The traffic forecast for the Backbone Study was developed by HNTB from the current Appleton Metropolitan Planning Organization (MPO) travel demand model. K30 traffic volumes were used to analyze USH 41 basic freeway segments.

Average daily traffic volumes for existing year, 2020, and 2035 are shown in Exhibit 4. Peak hour volumes, including turning movements, for existing year, 2020, and 2035 are shown in Exhibit 5.

Operational Analysis

Operational analysis included LOS analysis at all freeway and ramp terminal segments of the USH 41 and STH 47 interchange. We analyzed the existing interchange layout with forecasted traffic volumes for AM and PM peak hours for years 2020 and 2035. K30 traffic volumes were used to analyze USH 41 basic freeway segments on each side of the interchange. The existing interchange layout currently operates within capacity; however, by 2020 the westbound merges

operate at LOS E for the AM peak. In the 2035 scenario, the eastbound and westbound merge and diverges operate at either LOS E or F. By 2020, USH 41 will operate at LOS E east and west of the interchange. LOS results for the freeway segments are in Table 1. LOS results for the ramp terminal intersections are shown in Table 2. Details of the no-build operational analysis are in Appendix C.

Table 1

FREEWAY LEVEL OF SERVICE NO-BUILD CONDITIONS							
Year	**Location**	**EB Diverge**	**EB Merge**	**WB Diverge**	**WB Merge**	**Freeway West of STH 47**	**Freeway East of STH 47**
	Type of HCS Analysis	**Ramp Junction**	**Ramp Junction**	**Ramp Junction**	**Ramp Junction**	**K30**	**K30**
Existing	**AM**	C	C	C	D	D	D
	PM	D	C	C	C		
2020	**AM**	C	C	D	E	E	E
	PM	D	D	D	D		
2035	**AM**	D	C	E	F	F	F
	PM	E	E	E	D		

Table 2

INTERSECTION LEVEL OF SERVICE NO-BUILD CONDITIONS																
Location	Analysis Year	Peak Hour	Overall Intersection	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
EB Ramps Terminal (signals)	Existing	AM	B	C	C	C	--	--	--	--	C	C	A	A	--
		PM	B	C	C	C	--	--	--	--	C	C	A	A	--
	2020	AM	B	C	C	C	--	--	--	--	C	C	B	A	--
		PM	C	D	D	C	--	--	--	--	D	C	A	A	--
	2035	AM	C	D	D	C	--	--	--	--	D	C	B	A	--
		PM	D	D	D	D	--	--	--	--	F	D	A	A	--
WB Ramps Terminal (signals)	Existing	AM	C	--	--	--	C	C	C	A	A	--	--	C	C
		PM	B	--	--	--	C	C	C	A	A	--	--	C	C
	2020	AM	C	--	--	--	C	C	C	B	A	--	--	D	D
		PM	B	--	--	--	D	D	C	A	A	--	--	C	C
	2035	AM	D	--	--	--	C	C	C	B	A	--	--	E	E
		PM	C	--	--	--	D	D	C	B	A	--	--	D	C

Queues from the signalized ramp terminal intersections at both the eastbound and westbound off-ramps do not extend past the gores for either the 2020 or 2035 scenarios. Maximum queue lengths are shown in Table 3.

Table 3

RAMP TERMINAL QUEUE LENGTHS NO-BUILD CONDITIONS				
	Distance from Terminal to Gore	Existing	2020	2035
EB Off-Ramp	1,250 ft	188 ft	246 ft	304 ft
WB Off-Ramp	1,400 ft	238 ft	227 ft	470 ft

Crash Analysis

We completed a crash analysis for the two merge influence areas, two diverge influence areas, and two ramp terminal intersections from years 2000 to 2004. We calculated crash rates and severity for each year at each interchange influence area. An estimated 127 crashes occurred at the merge and diverge areas, and ramp segments of the USH 41 and STH 47 interchange from 2000 to 2004. Fifty-eight percent of these crashes occurred at the signalized ramp terminals. Average annual crash rates and crash severity are shown in Table 4. A summary of the crash data is in Exhibit 9. Details of the crash analysis are in Appendix D.

The westbound ramp terminal has a crash rate of 1.23, which exceeds the 1.0 threshold for identifying intersections with safety issues. The westbound diverge has a crash rate higher than the average crash rate observed in the Backbone Study.

The high crash rate at the westbound ramp terminal is likely an effect of having no left turn storage on STH 47. This results in a left turn queue that spills back into a through lane.

Table 4

CRASH HISTORY USH 41 AND STH 47 INTERCHANGE						
Location	Year	Crash Type			Average Annual Crash Rate	Crash Severity
		PDO	Injury	Fatal		
Eastbound Diverge (HMVMT)	2000-2004	10	3	0	58	0.23
Eastbound Merge (HMVMT)	2000-2004	6	5	0	51	0.45
Westbound Diverge (HMVMT)	2000-2004	16	4	0	90	0.20
Westbound Merge (HMVMT)	2000-2004	7	3	0	49	0.30
EB Ramps (MVE)	2000-2004	18	9	0	0.66	0.33
WB Ramps (MVE)	2000-2004	30	16	0	1.23	0.35
Totals	2000-2004	87	40	0	---	---

Geometric and Structural Analysis

WisDOT provided the following as-built plans, which were used as the starting point for the geometric and structural analysis (As-built plan sheets are in Appendix B):

- WisDOT ID Number: F 03-2 - 1961
- WisDOT ID Number: 0044-14-12&13 - 1985
- WisDOT ID Number: 0083-09-99 - 1995

The interchange has several geometric deficiencies, the most significant being bridge related. The eastbound on-ramp's acceleration taper is 600 feet less than desirable and has a sag vertical curve less than the design speed. STH 47 has major access spacing deficiencies to both the north and south. The worst accesses are a private access point 200 feet south of the eastbound ramp terminal, and the Association Drive intersection 400 feet south of the eastbound ramp terminal. Both ramp terminals have no left turn lane on STH 47. The dual left turn lanes on both off-ramps are deficient in both width and length.

The structures that carry STH 47 over USH 41 have sufficiency ratings less than 80. The bridges also have deficient vertical clearance and clear widths. The vertical clearances range from 15.05 feet to 15.4 feet. The clear width of the structures is 30 feet. The existing geometric deficiencies are summarized in Exhibits 9 and 10. Details of the geometric analysis are in Appendix E.

ALTERNATIVE EVALUATION

The main objective for the three improvement alternatives was to correct the existing and projected operational and safety deficiencies. In all three alternatives, the interchange acceleration and deceleration lanes are extended to improve operational and safety deficiencies. The alternatives also provide needed storage on the ramps for left turn movements at the ramp terminals. The long-term alternatives address the deficiencies of the two existing structures with rehabilitation and replacement included. Earth Tech analyzed the alternatives, with the results presented in this report. An overall summary of the alternatives and their evaluation results is in Exhibit 1.

The Northeast Region will be raising the bridges in 2010 to remove the clearance deficiency.

We completed operational analysis for the short-term alternative in forecast year 2020 and long-term alternatives in forecast year 2035. Throughout the alternative evaluation, we reviewed right-of-way plans, utility plans, and completed environmental screenings for each alternative. We also estimated crash benefits and construction costs.

Short-Term Alternative 1

The proposed Short-Term Alternative 1 improvements include extending the eastbound and westbound acceleration and deceleration lanes to meet desirable standards, and improving the off-ramp terminals by better defining the dual left turn lanes and extending the left turn storage. This alternative does not improve the bridges.

Short-Term Alternative 1 is shown in Exhibit 6.

Operational Analysis

The off-ramp left turn lane and ramp acceleration and deceleration lane improvements slightly improve overall or individual movement LOS, but are primarily intended to improve the safety of the interchange. The off-ramp queues in 2020 will be slightly longer than the existing queues. USH 41 west and east of STH 47 will operate at LOS E.

LOS results for the freeway segments are in Table 5. LOS results for the ramp terminals are shown in Table 6. Queue results for the ramp terminal intersections are shown in Table 7. Operational analysis details are in Appendix F.

Table 5

FREEWAY LEVEL OF SERVICE SHORT-TERM ALTERNATIVE 1					
Year	Location	EB Diverge	EB Merge	WB Diverge	WB Merge
	Type of HCS Analysis	Ramp Junction	Ramp Junction	Ramp Junction	Ramp Junction
2020	AM	B	B	C	D
	PM	C	C	C	C

Table 6

INTERSECTION LEVEL OF SERVICE SHORT-TERM ALTERNATIVE 1															
Location	Analysis Year	Peak Hour	Overall	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
EB Ramps (signals)	2020	AM	B	C	C	C	--	--	--	--	C	C	B	A	--
		PM	C	D	D	C	--	--	--	--	D	C	A	A	--
WB Ramps (signals)	2020	AM	C	--	--	--	C	C	C	B	A	--	--	D	D
		PM	B	--	--	--	D	D	C	A	A	--	--	C	C

Table 7

QUEUE RESULTS SHORT-TERM ALTERNATIVE 1		
	Distance from Terminal to Gore	2020
EB Off-Ramp	1,250 ft	246 ft
WB Off-Ramp	1,400 ft	234 ft

Impacts

Alternative impacts data is in Appendix G.

Right of Way

Short-Term Alternative 1 does not require right-of-way acquisition.

Utilities

The construction of Short-Term Alternative 1 does not include utility costs.

Environmental

Potential low environmental impacts include threatened species that exist in the project area. The environmental screening analysis summary is in Exhibit 11.

Safety Benefits

Short-Term Alternative 1 includes better definition of the left turn lanes at the ramp terminals, thus we included benefits for adding a left turn lane at both off-ramp terminal intersections. In addition, benefits for extending the eastbound and westbound acceleration and deceleration lanes were added. We estimated crash reduction benefits at each freeway segment and for the overall alternative. We estimated a 16,000 annual crash benefit from the extension of the acceleration and deceleration lanes, and 22,000 and 39,000 for the eastbound and westbound ramp terminal intersections, respectively. A summary of the crash reduction benefits is shown in Table 8. Details of the crash reduction benefits are in Appendix H.

Table 8

CRASH REDUCTION BENEFITS SHORT-TERM ALTERNATIVE 1							
	EB Diverge	EB Merge	WB Diverge	WB Merge	EB Ramps	WB Ramps	Total
Short-Term Alternative 1	3	5	5	3	22	39	77

Note: Benefits expressed in thousands per year.

Construction Costs

The cost estimate for Short-Term Alternative 1 includes design and construction costs. The estimated cost for Short-Term Alternative 1 is $3,120,000. The cost estimate summary is in Exhibit 2, and the details of the cost estimate are in Appendix I.

Long-Term Alternative 2

The concept for Long-Term Alternative 2 provides roundabouts at the ramp terminal intersections and includes redecking and widening of the existing bridges, raised medians on STH 47 south of the eastbound ramps, and extensions of the ramp acceleration and deceleration lanes from the Short-Term Alternative 1. The two lane roundabouts include right turn bypass lanes where needed. Dual lanes are included on all the off- and on-ramps.

Long-Term Alternative 2 is shown in Exhibit 7.

Operational Analysis

This alternative improves intersection operations to overall LOS A, with individual movements also significantly improved. USH 41 will operate at LOS F, and the westbound merge will operate at LOS F during the AM peak periods of the 2035 analysis. In order to significantly improve the westbound merge LOS, additional through capacity is needed on the mainline.

LOS results for the freeway segments are in Table 9. LOS results for the ramp terminals are shown in Table 10. Queue results for the ramp terminal intersections are shown in Table 11. Operational analysis details are in Appendix F.

Table 9

FREEWAY LEVEL OF SERVICE LONG-TERM ALTERNATIVE 2					
Year	Location	EB Diverge	EB Merge	WB Diverge	WB Merge
	Type of HCS Analysis	Ramp Junction	Ramp Junction	Ramp Junction	Ramp Junction
2035	AM	C	C	D	F
2035	PM	D	D	D	C

Table 10

ROUNDABOUT LEVEL OF SERVICE LONG-TERM ALTERNATIVE 2															
Location	Analysis Year	Peak Hour	Overall	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
EB Ramps	2035	AM	A	--	--	--	--	A	--	--	A	--	--	A	--
		PM	A	--	--	--	--	C	--	--	A	--	--	A	--
WB Ramps	2035	AM	A	--	A	--	--	--	--	--	A	--	--	A	--
		PM	A	--	B	--	--	--	--	--	A	--	--	A	--

Table 11

QUEUE RESULTS LONG-TERM ALTERNATIVE 2		
	Distance from Terminal to Gore	2035
EB Off-Ramp	1,250 ft	150 ft
WB Off-Ramp	1,400 ft	75 ft

Impacts

Alternative impacts data is in Appendix G.

Right of Way

Long-Term Alternative 2 requires approximately 0.40 acre of right of way for construction of the right turn bypass lanes. Based on local real estate information, we estimate the right-of-way acquisition will cost approximately $200,000 per acre, resulting in a total right-of-way cost estimated to be $80,000.

Utilities

Construction of the right turn bypass lanes at the north roundabout may involve relocating the existing AT&T conduits. Due to lack of feedback from the AT&T, an estimated $100,000 in compensable costs to move the utilities into the new right of way were included.

Environmental

Potential low environmental impacts include threatened species that exist in the project area. The environmental screening analysis summary is in Exhibit 11.

Safety Benefits

The reconstruction of the existing terminal intersections to roundabouts results in a 151,000 benefit and 16,000 in annual crash benefit from the extension of the acceleration and

deceleration lanes. A summary of the crash reduction benefits for Long-Term Alternative 2 is shown in Table 12. Details of the crash reduction benefits are in Appendix H.

Table 12

CRASH REDUCTION BENEFITS LONG-TERM ALTERNATIVE 2							
	EB Diverge	EB Merge	WB Diverge	WB Merge	EB Ramps	WB Ramps	Total
Long-Term Alternative 2	3	5	5	3	61	90	167

Note: Benefits expressed in thousands per year.

Construction Costs

The cost estimate for Long-Term Alternative 2 includes design, construction, right-of-way, and utility costs. The estimated cost for Long-Term Alternative 2 is $7,900,000. The cost estimate summary is in Exhibit 2, and the details of the cost estimate are in Appendix I.

Long-Term Alternative 3

Long-Term Alternative 3 reconstructs STH 47 through the interchange with added left turn lanes on both STH 47 and the off ramps at the signalized ramp terminal intersections. This alternative includes the improvements to the STH 47 medians, and merges and diverge taper extensions identified in the first alternatives. The bridges will be replaced with two span structures that will accommodate left turn lanes on STH 47 and 6 lanes on USH 41.

This alternative fully addresses operational and safety concerns currently experienced at the interchange. The alternative allows traffic operations to have excess capacity in the 2035 design year. Although the intersection levels of service are improved from existing and short-term conditions, this alternative does not match the excellent LOS from the roundabouts. In addition, this alternative is more costly than Long-Term Alternative 2.

Long-Term Alternative 3 is shown in Exhibit 8.

Operational Analysis

The ramp terminal intersections provide individual turning movements of LOS D or better, with the overall intersections at LOS C. USH 41 will operate at LOS F, and the westbound merge will operate at LOS F during the AM peak periods of the 2035 analysis. In order to significantly improve the westbound merge LOS, additional through capacity is needed on the mainline. LOS results for the freeway segments are in Table 13. LOS results for the signalized ramp terminals are shown in Table 14. Queue results for the ramp terminal intersections are shown in Table 15. Operational analysis details are in Appendix F.

Table 13

FREEWAY LEVEL OF SERVICE LONG-TERM ALTERNATIVE 3					
Year	Location	EB Diverge	EB Merge	WB Diverge	WB Merge
	Type of HCS Analysis	Ramp Junction	Ramp Junction	Ramp Junction	Ramp Junction
2035	AM	C	C	D	F
	PM	D	D	D	C

Table 14

INTERSECTION LEVEL OF SERVICE LONG-TERM ALTERNATIVE 3															
Location	Analysis Year	Peak Hour	Overall	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
EB Ramps (signals)	2035	AM	C	D	D	C	--	--	--	--	C	C	B	A	--
		PM	C	D	D	D	--	--	--	--	D	C	B	A	--
WB Ramps (signals)	2035	AM	C	--	--	--	C	C	C	B	A	--	--	C	D
		PM	C	--	--	--	D	D	C	A	A	--	--	C	C

Table 15

QUEUE RESULTS LONG-TERM ALTERNATIVE 3		
	Distance from Terminal to Gore	2035
EB Off-Ramp	1,250 ft	187 ft
WB Off-Ramp	1,400 ft	264 ft

Impacts

Alternative impacts data is in Appendix G.

Right of Way

Long-Term Alternative 3 does not require any right-of-way acquisition.

Utilities

Long-Term Alternative 3 does not impact any utilities.

Environmental

Potential low environmental impacts include threatened species that exist in the project area. The environmental screening analysis summary is in Exhibit 11.

Safety Benefits

Long-Term Alternative 3 adds the benefit of installing a left and right turn lane on STH 47 at both ramp terminal intersections and restricting access to the south, resulting in 118,000 in annual benefits and 16,000 in annual crash benefit from the extension of the acceleration and deceleration lanes. A summary of the crash reduction benefits for Long-Term Alternative 3 is shown in Table 16. Details of the crash reduction benefits are in Appendix H.

Table 16

CRASH REDUCTION BENEFITS LONG-TERM ALTERNATIVE 3							
	EB Diverge	EB Merge	WB Diverge	WB Merge	EB Ramps	WB Ramps	Total
Long-Term Alternative 3	3	5	5	3	51	67	134

Note: Benefits expressed in thousands per year.

Construction Costs

The cost estimate for Long-Term Alternative 3 includes design, construction, right-of-way, and utility costs. The estimated cost for Long-Term Alternative 3 is $9,200,000. The cost estimate summary is in Exhibit 2, and the details of the cost estimate are in Appendix I.

Exhibits

WisDOT Backbone Needs and Improvement Study

EarthTech
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EXHIBIT 1 - INTERCHANGE EVALUATION SUMMARY

USH 41 and STH 47 INTERCHANGE

Outagamie County

EXHIBIT 1
WisDOT ID 1111-11-99
April 2007

ALTERNATIVES CHARACTERISTICS	NO-BUILD ALTERNATIVE	SHORT-TERM ALTERNATIVE 1	LONG-TERM ALTERNATIVE 2	LONG-TERM ALTERNATIVE 3
DESCRIPTION	> Existing interchange configuration	> Extend all EB and WB merge and diverge lanes > Extending and widening left turn storage at both ramp terminals	> Diverge deceleration and merge acceleration extensions from Short Term Alternative 1 > Reconstruction of the ramp terminal intersections into two lane roundabouts with right turn bypass lanes > Redeck and widen the existing bridges 6 feet > Convert the STH 47 mountable median to a raised median from W. Evergreen Drive south to Capitol Drive to control access	> Diverge deceleration and merge acceleration extensions from Short Term Alternative 1 > Convert the STH 47 mountable median to a raised median from W. Evergreen Drive south to Capitol Drive to control access > Reconstruction of STH 47 through the interchange to provide adequate lanes > Provide 350-foot dual left and single right turn lanes on the off-ramps at the westbound and eastbound ramp terminals > Replace existing bridges with new structures that will accommodate 6 lanes on USH 41
TOTAL COSTS		> $3.10 million	> $7.90 million	> $9.20 million
TRAFFIC OPERATIONS	> Ramp terminal intersections are LOS D or better through 2035 > All merge & diverge locations at LOS D or better today; most LOS E or F in 2035 > USH 41 east & west of interchange at LOS D today; LOS E in 2020 & LOS F in 2035	> Both ramp terminals improve to LOS C in 2020 > All merge and diverge locations improve to LOS D or better in 2020	> Improves both ramp terminal intersections to LOS A > WB merge at LOS F in 2035 for AM Peak > Off-ramp queues reduced from 470 to <200 feet	> Improves both ramp terminal intersections to LOS C > Off-ramp queues reduced from 470 to < 300 feet > WB merge at LOS F in 2035 for AM Peak
CRASHES and SAFETY	> Average 25 crashes annually > Highest crash location is WB ramp terminal with 9 annual crashes and a 1.23 crash rate, indicating safety issue	> Annual crash benefit - 77,000 > Better definition and storage for off-ramp left turn lanes should reduce crashes > Extending acceleration and deceleration lanes should reduce crashes	> Annual crash benefit - 167,000 > Conversion of intersections to roundabouts has significant reduction in crashes > Extending acceleration and deceleration lanes should reduce crashes	> Annual crash benefit - 134,000 > Increased capacity at ramp terminals should reduce crashes > Extending acceleration and deceleration lanes should reduce crashes
GEOMETRIC and ACCESS SPACING	> EB on-ramp has acceleration taper deficiency > Both ramp terminals have no left turn lane on STH 47 > The dual left turn lanes on both off-ramps are deficient in both width and length > Private access & Association Dr. less than 400' from EB Ramps	> Merge & Diverge geometric deficiencies improved	> Fully addresses all geometric deficiencies > Raised medians from W. Evergreen Drive south to Capitol Drive will control access	> Fully address all geometric deficiencies > Raised medians from W. Evergreen Drive south to Capitol Drive will control access
BRIDGES	> Bridges have 78.2 and 78.4 sufficiency ratings and clear widths and vertical clearances much less than minimum > Bridges are programmed for raising in 2010	> No changes	> Redeck and widen bridges 6 feet	> Replace existing bridges with new structures that will accommodate 6 lanes on USH 41
RIGHT OF WAY and UTILITIES IMPACTS		> No R/W or utility impacts	> Minor R/W impacts > 0.4 acres R/W at a total cost of $80,000 > Potential AT&T utility impacts > Total estimated cost $100,000	> No R/W or utility impacts
ENVIRONMENTAL		> Threatened species exist in project area	> Threatened species exist in project area	> Threatened species exist in project area
ADVANTAGES		> Improves both high crash rate locations > Improves operations of merge and diverge locations > Ramp improvements are compatible with both long-term alternatives	> Fully addresses the operational and safety deficiencies through 2035 > Excellent LOS at ramp terminal intersections > Can be constructed with current bridges	> Fully addresses the operational and safety deficiencies through 2035 > New bridges accommodate USH 41 expansion
DISADVANTAGES	> Traffic operations at merge/diverge junctions will decrease to LOS E & F > High crash rates at WB ramp terminal and WB merge will continue > Bridge sufficiency ratings will continue to drop	> Does not address long-term bridge needs > Does not address STH 47 left turn safety concerns > Does not address access spacing	> Does not provide room under bridges for future 6 lanes on USH 41	> Overall LOS and crash benefit less than Long-Term Alternative 2
CONCLUSIONS and RECOMMENDATIONS	> Not recommended	> Provides significant benefit for low cost	> Provides significant benefits by creating excellent intersection LOS > Rehabilitates the structures > Bridges will have to be rebuilt when future USH 41 is built	> Addresses all deficiencies and provides good mobility > Bridges provide for future 6 lanes on USH 41

US 41/STH 47 Interchange
Cost Estimate Summary
Backbone Interchanges Needs and Improvements Study

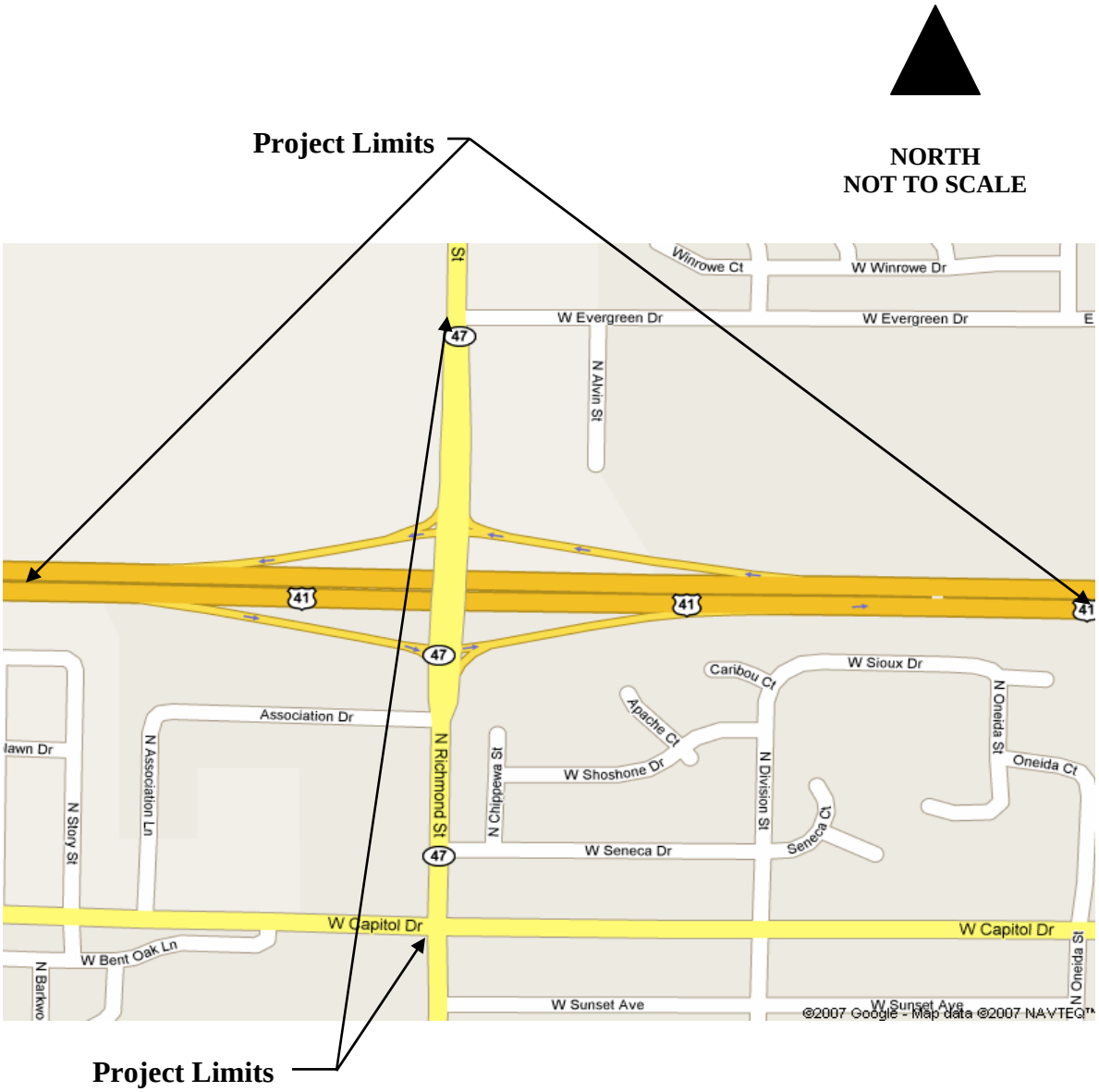
SHORT TERM ALTERNATIVE 1 PROJECT SEGMENT	STRUCT. COST	CONST. COST *	R/W COST **	ENGR. COST	TOTAL COST ***
EB DECELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
EB ACCELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
WB DECELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
WB ACCELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
EB LEFT TURN LANE	$ -	$ 130,000	$ -	$ 29,000	**$ 160,000**
WB LEFT TURN LANE	$ -	$ 130,000	$ -	$ 29,000	**$ 160,000**
TOTAL PROJECT COST					**$ 3,120,000**

LONG TERM ALTERNATIVE 2 PROJECT SEGMENT	STRUCT. COST	CONST. COST *	R/W COST **	ENGR. COST	TOTAL COST ***
EB DECELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
EB ACCELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
WB DECELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
WB ACCELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
SOUTH ROUND ABOUT	$ -	$ 196,000	$ -	$ 43,000	**$ 240,000**
NORTH ROUND ABOUT	$ -	$ 196,000	$ -	$ 43,000	**$ 240,000**
STH 47 4 LANE URBAN	$ -	$ 1,180,000	$ -	$ 260,000	**$ 1,440,000**
EB OFF RAMP	$ -	$ 73,000	$ -	$ 16,000	**$ 90,000**
EB ON RAMP	$ -	$ 210,000	$ 26,000	$ 47,000	**$ 290,000**
WB OFF RAMP	$ -	$ 70,000	$ -	$ 16,000	**$ 90,000**
WB ON RAMP	$ -	$ 183,000	$ 34,000	$ 90,000	**$ 310,000**
NB RIGHT TURN LANE	$ -	$ 143,000	$ 68,000	$ 31,000	**$ 250,000**
REDECK AND WIDEN EXISTING STRUCTURES	$ 1,300,000	$ 1,755,000	$ -	$ 386,000	**$ 2,150,000**
TOTAL PROJECT COST					**$ 7,900,000**

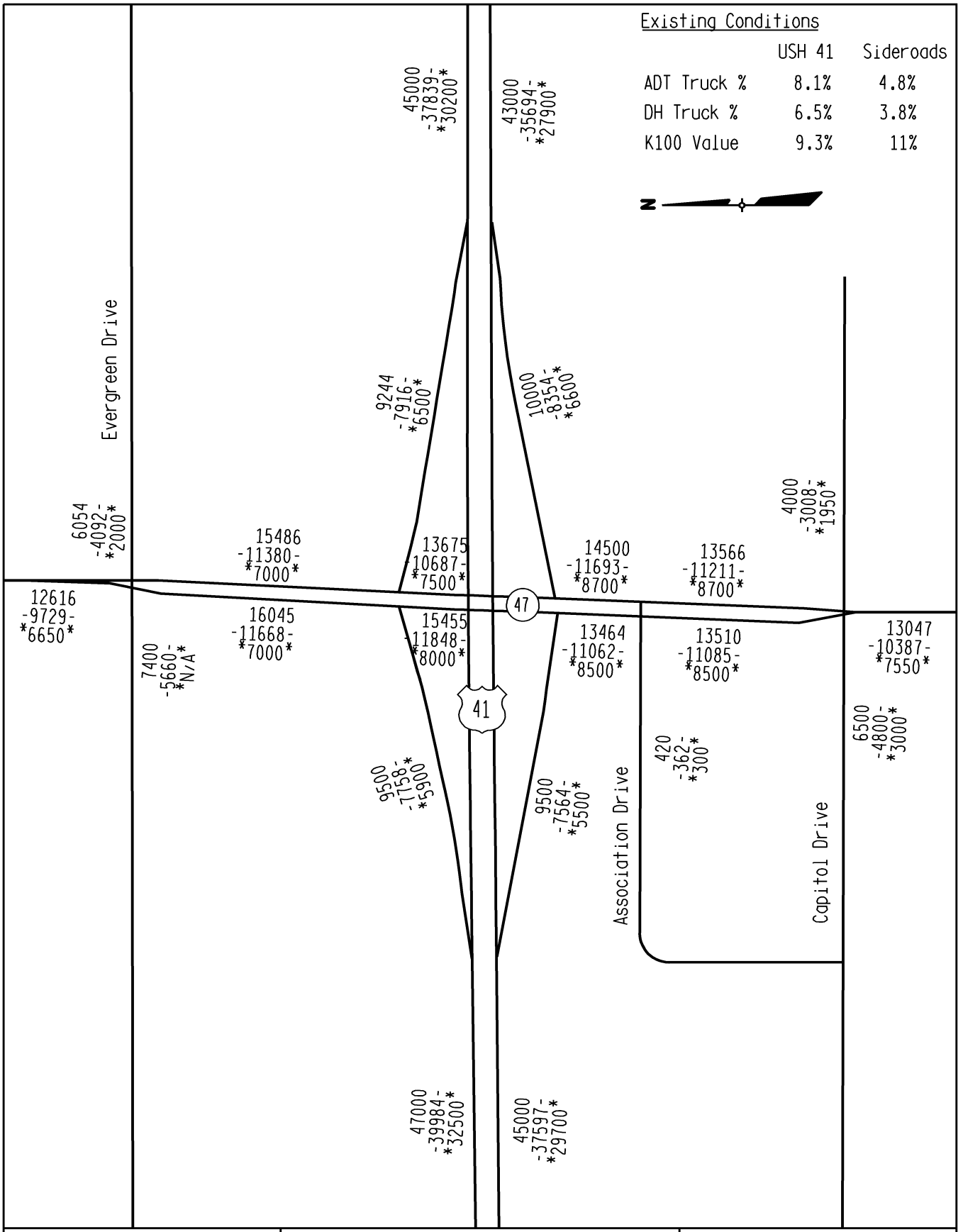
LONG TERM ALTERNATIVE 3 PROJECT SEGMENT	STRUCT. COST	CONST. COST *	R/W COST **	ENGR. COST	TOTAL COST ***
EB DECELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
EB ACCELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
WB DECELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
WB ACCELERATION LANE	$ -	$ 567,000	$ -	$ 125,000	**$ 700,000**
NORTH 6 LANE SECTION	$ -	$ 261,000	$ -	$ 57,000	**$ 320,000**
SOUTH 6 LANE SECTION	$ -	$ 260,000	$ -	$ 57,000	**$ 320,000**
STH 47 4 LANE URBAN	$ -	$ 1,180,000	$ -	$ 260,000	**$ 1,440,000**
EB OFFRAMP RIGHT TURN LANE	$ -	$ 78,000	$ -	$ 17,000	**$ 100,000**
EB ONRAMP RIGHT TURN LANE	$ -	$ 98,000	$ -	$ 22,000	**$ 120,000**
WB OFFRAMP RIGHT TURN LANE	$ -	$ 79,000	$ -	$ 18,000	**$ 100,000**
WB ONRAMP RIGHT TURN LANE	$ -	$ 98,000	$ -	$ 22,000	**$ 120,000**
EB OFFRAMP LEFT TURN LANES	$ -	$ 135,000	$ -	$ 29,000	**$ 170,000**
WB OFFRAMP LEFT TURN LANES	$ -	$ 136,000	$ -	$ 30,000	**$ 170,000**
EB ONRAMP THRU LANE	$ -	$ 63,000	$ -	$ 13,000	**$ 80,000**
WB ONRAMP THRU LANE	$ -	$ 63,000	$ -	$ 13,000	**$ 80,000**
BRIDGE REPLACEMENT	$ 2,055,000	$ 2,767,000	$ -	$ 609,000	**$ 3,380,000**
TOTAL PROJECT COST					**$ 9,200,000**

* Includes Structure Cost
** Includes Utility Costs
*** Rounded to next highest $10,000

Exhibit 3
Project Location Map



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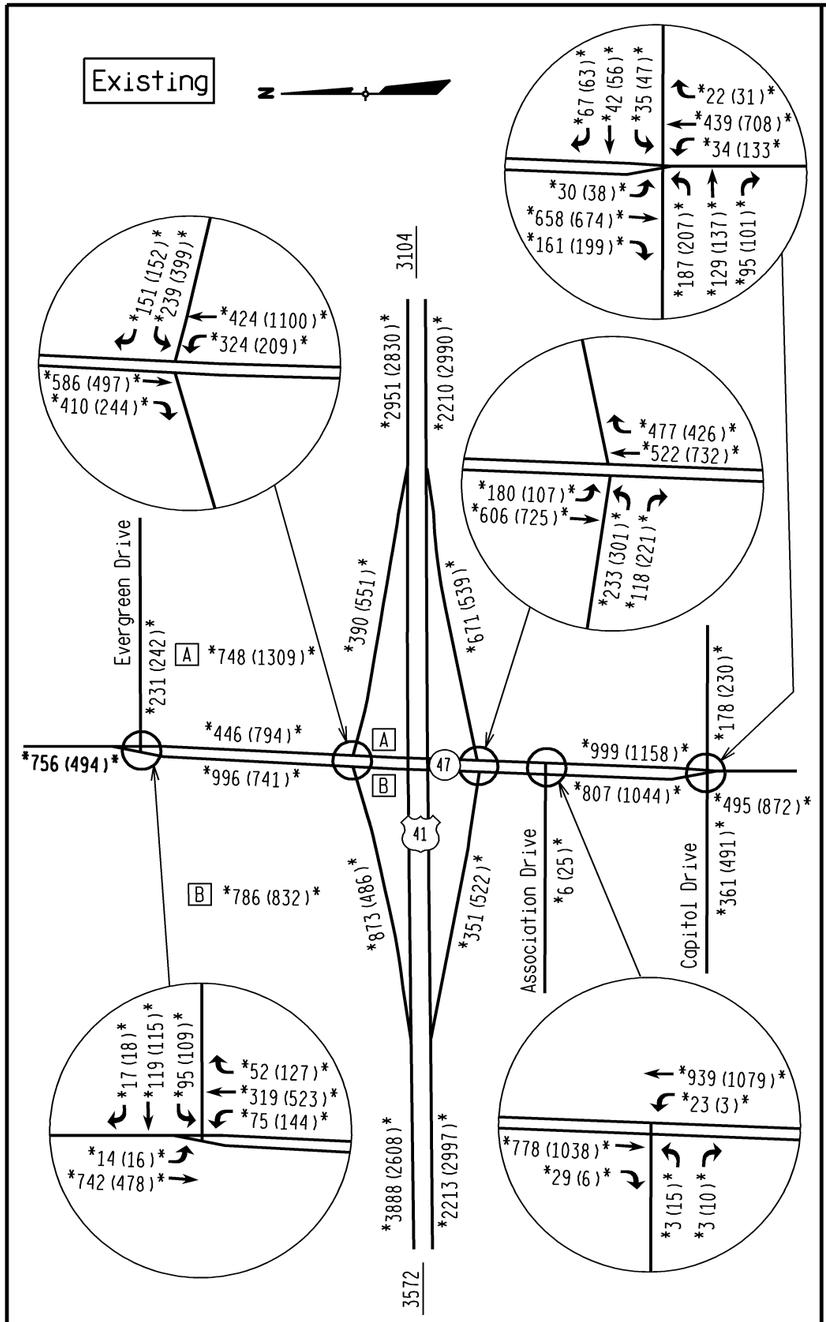
USH 41/STH 47
BACKBONE INTERCHANGE NEEDS & IMPROVEMENT STUDY

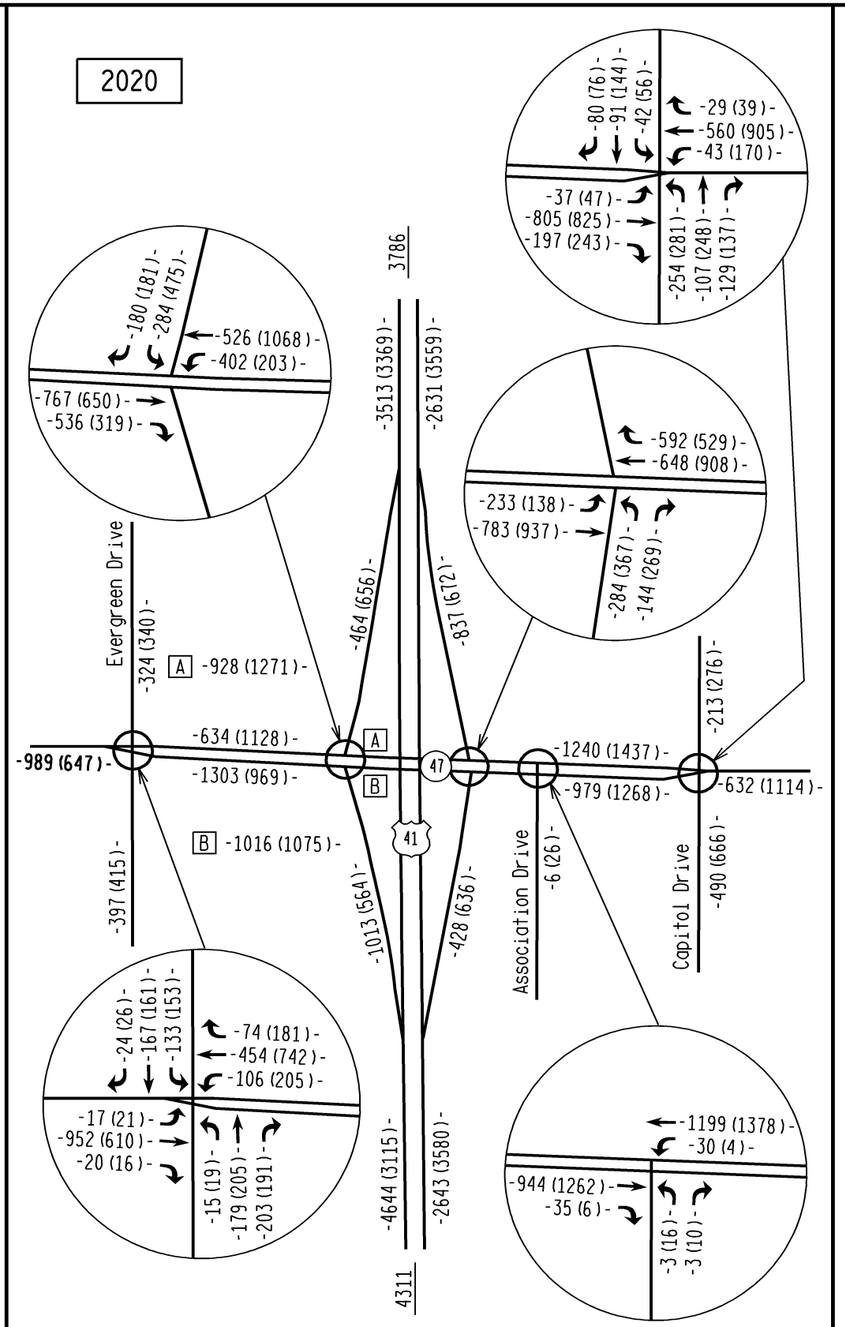
XXX = 2035 ADT
-XXX- = 2020 ADT
XXX = Existing ADT

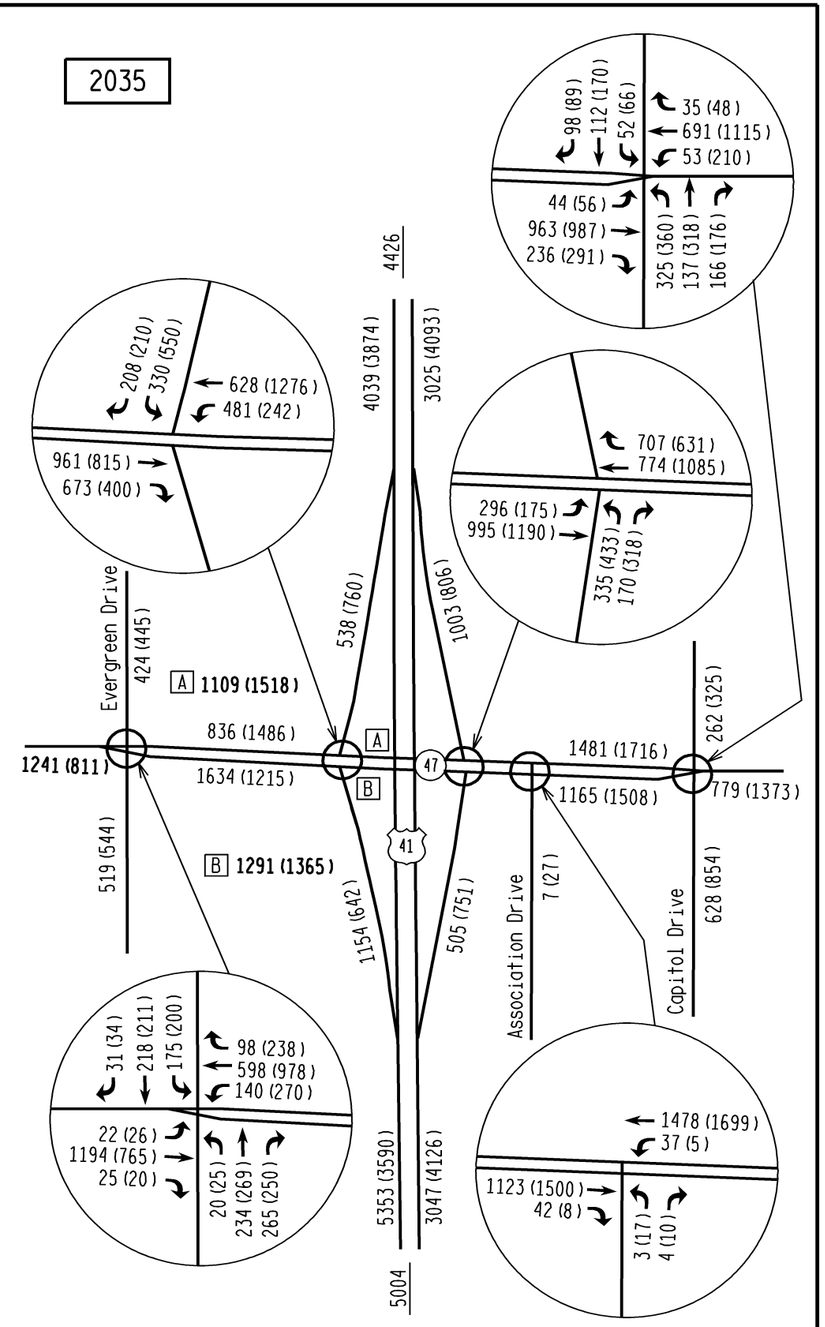
PROJECT NO. 91355 | OCTOBER 2006

Average Daily Traffic (ADT)

EXHIBIT 4
SHEET 1 OF 1







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PROJECT NO. 91355 | JANUARY 2007

USH 41/STH 47
BACKBONE INTERCHANGE NEEDS & IMPROVEMENT STUDY

PEAK HOUR TRAFFIC VOLUMES AND TURNING MOVEMENTS

XX (XX) = 2035 AM Peak (PM Peak) *XX (XX)* = Existing AM Peak (PM Peak)
-XX (XX)- = 2020 AM Peak (PM Peak) XXX = K30 VOLUMES

EXHIBIT 5
SHEET 1 OF 1

SHORT- TERM ALTERNATIVE 1

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 47 (RICHMOND)
OUTAGAMIE COUNTY

LEGEND
- EXISTING RIGHT OF WAY
- PROPOSED IMPROVEMENTS

N
SCALE 0' 200' 400'

W EVERGREEN DR

STH 47

EXTEND ACCELERATION LANE 800 FEET

PROVIDE ADDITIONAL LEFT TURN STORAGE

EXTEND OFF- RAMP DECELERATION LANE 1000 FEET

USH 41

USH 41

EXTEND OFF- RAMP DECELERATION LANE 1100 FEET

ASSOCIATION DR

PROVIDE ADDITIONAL LEFT TURN STORAGE

EXTEND ACCELERATION LANE 600 FEET

W SHOSHONE DR

W SENECA DR

W CAPITOL DR

N RICHMOND ST

ADVANTAGES

- IMPROVE DEFINITION OF EXISTING RAMP LEFT TURN LANES
- IMPROVES OPERATIONAL DEFICIENCIES OF MERGE AND DIVERGE LOCATIONS

DISADVANTAGES

- DOES NOT ADDRESS BRIDGE NEEDS
- DOES NOT ADDRESS STH 47 LEFT TURN SAFETY CONCERNS

WISCONSIN DEPARTMENT OF TRANSPORTATION

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EXHIBIT 6
MARCH 2007

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LONG- TERM ALTERNATIVE 2

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 47 (RICHMOND)
OUTAGAMIE COUNTY

LEGEND
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

N
SCALE 0' 75' 150'

N RICHMOND ST

STH 47

RAISED MEDIAN IMPROVEMENTS TO W EVERGREEN DR SHOWN ON EXHIBIT 8 AND INCLUDED IN THIS ALTERNATIVE

RIGHT TURN BYPASS LANE

0.17 AC. +/-

0.09 AC. +/-

RIGHT TURN BYPASS LANE

290 FT. DUAL LANE

USH 41

TWO LANE ROUNDABOUT

REDECK, LIFT AND WIDEN BRIDGES 6'

ACCELERATION LANE EXTENSION IS SHOWN ON EXHIBIT 6 AND INCLUDED IN THIS ALTERNATIVE

DECELERATION LANE EXTENSION IS SHOWN ON EXHIBIT 6 AND INCLUDED IN THIS ALTERNATIVE

DECELERATION LANE EXTENSION IS SHOWN ON EXHIBIT 6 AND INCLUDED IN THIS ALTERNATIVE

USH 41

ACCELERATION LANE EXTENSION IS SHOWN ON EXHIBIT 6 AND INCLUDED IN THIS ALTERNATIVE

200 FT. DUAL LANE

0.13 AC. +/-

RIGHT TURN BYPASS LANE

RAISED MEDIAN IMPROVEMENTS TO W CAPITOL DR SHOWN ON EXHIBIT 8 AND INCLUDED IN THIS ALTERNATIVE

ASSOCIATION DR

N RICHMOND ST

ADVANTAGES

- IMPROVED INTERSECTION SAFETY
- CAN BE CONSTRUCTED WITH CURRENT BRIDGE

DISADVANTAGES

- POSSIBLE CONFUSION WITH MULTI- LANE ROUNDABOUT

WISCONSIN DEPARTMENT OF TRANSPORTATION

EarthTech
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EXHIBIT 7
MARCH 2007

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LONG- TERM ALTERNATIVE 3

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 47 (RICHMOND)
OUTAGAMIE COUNTY

LEGEND
- EXISTING RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

N
0' 150' 300'
SCALE

STH 47
W EVERGREEN DR
CONVERT TO RAISED MEDIAN AND RECONSTRUCT FULL ROADWAY SECTION
IMPROVED SIGNAL OPERATIONS
LOOK AHEAD LT. TURN LANE, 300 FT.
PROVIDE 2 LEFT TURN AND 1 RIGHT TURN LANES, 350 FT. LONG
WB ON RAMP 250 FT. DUAL LANES
ACCELERATION LANE EXTENSION IS SHOWN ON EXHIBIT 6 AND INCLUDED IN THIS ALTERNATIVE
USH 41
NEW BRIDGE ACCOMODATES 6 LANES OVER USH 41
DECELERATION LANE EXTENSION IS SHOWN ON EXHIBIT 6 AND INCLUDED IN THIS ALTERNATIVE
USH 41
DECELERATION LANE EXTENSION IS SHOWN ON EXHIBIT 6 AND INCLUDED IN THIS ALTERNATIVE
PROVIDE 2 LEFT TURN AND 1 RIGHT TURN LANES, 350 FT. LONG
ASSOCIATION DR
IMPROVED SIGNAL OPERATIONS
EB ON RAMP 250 FT. DUAL LANES
LOOK AHEAD LT. TURN LANE, 300 FT.
ACCELERATION LANE EXTENSION IS SHOWN ON EXHIBIT 6 AND INCLUDED IN THIS ALTERNATIVE
W SHOSHONE DR
CONVERT TO RAISED MEDIAN AND RECONSTRUCT FULL ROADWAY SECTION
W SENECA DR
W CAPITOL DR
STH 47
N RICHMOND ST

ADVANTAGES
- IMPROVED STH 47 LEFT TURN SAFETY
- NEW BRIDGE ACCOMMODATES USH 41 EXPANSION

DISADVANTAGES
- HIGHER COST THAN OTHER ALTERNATIVES

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EXHIBIT 8
MARCH 2007

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Backbone Route	Crossroad
USH 41	STH 47
Region	**Location**
North East	City of Appleton
Interchange Type	**Crossroad Function**
Diamond	Rural Minor Arterial
Ramp Terminal	**Bridge Sufficiency**
Signalized	B-44-35 = 78.2
	B-44-36 = 78.4
Bridge Hits	**Bridge Service Life**
0	Constructed –1961 Overlay - 1982



No-Build Conditions

		EB Diverge	EB Merge	WB Diverge	WB Merge	EB Ramps	WB Ramps	FWY East	FWY West	Total	Notes
LOS	2035	D(E)	C(E)	E(E)	F(D)	C(D)	D(C)	-F-	-F-	--	AM Peak (PM Peak) *Signalized Intersection -K30-
	2020	C(D)	C(D)	D(D)	E(D)	B(C)	C(B)	-E-	-E-	--	
	2005	C(D)	C(C)	C(C)	D(C)	B(B)	C(B)	-D-	-D-	--	
Queue	2035	--	--	--	--	304	470	--	--	--	Max Length of Queue Distance from Terminal to Gore: EB = 1250 WB = 1400
	2020	--	--	--	--	246	227	--	--	--	
	2005	--	--	--	--	188	238	--	--	--	
Crashes	(2000-2004)	13	11	20	10	27	46	--	--	127	
	Severity	0.23	0.45	0.20	0.30	0.33	0.35	--	--	--	(INJ+FAT) / Total Crash
	Rate	58	51	90	49	0.66	1.23	--	--	--	Merge & Diverge = HMVMT Intersection = MEV

Improved Conditions

		EB Diverge	EB Merge	WB Diverge	WB Merge	EB Ramps	WB Ramps	FWY East	FWY West	Total	Notes
LOS	L-T Alt. 3 2035	C(D)	C(D)	D(D)	F(C)	C(C)	C(C)	-F-	-F-	--	AM Peak (PM Peak) -K30-
	L-T Alt. 2 2035	C(D)	C(D)	D(D)	F(C)	A(A)	A(A)	-F-	-F-	--	
	S-T Alt. 1 2020	B(C)	B(C)	C(C)	D(C)	B(C)*	C(B)*	-E-	-E-	--	
Queue	L-T Alt. 3 2035	--	--	--	--	187	264	--	--	--	Max Length of Queue Distance from Terminal to Gore: EB = 1250 WB = 1400
	L-T Alt. 2 2035	--	--	--	--	150	75	--	--	--	
	S-T Alt. 1 2020	--	--	--	--	246	234	--	--	--	
Crash Benefits	L-T Alt. 3	3	5	5	3	51	67	--	--	134	Crash Benefits calculated by: Reduction in PD Crashes *7,000 + Reduction in INJ Crashes *35,000 + Reduction in FAT Crashes *70,000 (Benefits expressed in thousands)
	L-T Alt. 2	3	5	5	3	61	90	--	--	167	
	S-T Alt. 1	3	5	5	3	22	39	--	--	77	

Existing Geometric Deficiencies				
Freeway/Ramps (USH 41)	Acceptable	Poor	Severe	Comments
Ramp Design Speed	☐	☒	☐	EB on ramp sag curve speed rating 50 mph, less than 65 mph design speed of USH 41.
Ramp Horizontal Alignment	☒	☐	☐	Speed ratings for horizontal curves all greater than posted speed (65mph)
Ramp Merge/Diverge	☐	☒	☐	EB on ramp taper 600', required 1000'.
Stopping Sight Distance	☒	☐	☐	
Crossroad (STH 47)				
Intersection Sight Distance	☒	☐	☐	Signalized Intersection.
Access Control	☐	☐	☒	Entrance is 200' from SB ramp terminal. Minimum standard is 1000'
Bridge (Mainline over)				
Bridge Width	☐	☐	☒	Clear width is 30' & required width is 40' per bridge. Sufficiency ratings of 78.2 & 78.4, qualifying for funding.
Vertical Clearance	☐	☐	☒	Clearances nearly 1' less than required 16'.
Lateral Clearance	☒	☐	☐	

Alternative Construction Costs			
	Total Cost	Structure Costs	ROW Costs
Short Term Alternative 1	**$3,120,000**	$0	$0
Long Term Alternative 2	**$7,900,000**	$1,300,000	$128,000
Long Term Alternative 3	**$9,200,000**	$2,055,000	$0

Preferred Alternative Discussion

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 47 (RICHMOND)
OUTAGAMIE COUNTY
DEFICIENCIES

EVERGREEN DR.

STH 47

DEFICIENCY: ACCESS SPACING
SEPARATION BETWEEN RAMP TERMINAL & SIDE ROAD
EXISTING = 400 FT. DESIRABLE = 1000 FT.

DEFICIENCY: ACCESS SPACING
SEPARATION BETWEEN RAMP TERMINAL & ENTRANCE
EXISTING = 200 FT. DESIRABLE = 1000 FT.

USH 41

DEFICIENCY: TYPICAL SECTION
PAVED SHOULDER OUTSIDE = 6 FT. (REQUIRES 12 FT.)
PAVED SHOULDER INSIDE = 2 FT. (REQUIRES 12 FT.)

DEFICIENCY: EXISTING BRIDGES
EXISTING CLEARANCES = 15.05', 15.33', 15.16, & 15.41' (REQUIRES 16 FT.)

ASSOCIATION DR.

DEFICIENCY: EXISTING BRIDGES
EXISTING CLEAR WIDTH = 30 FT. (REQUIRES 40 FT.)
SUFFICIENCY RATINGS: 78.2 & 78.4

STH 47

DEFICIENCY: TYPICAL SECTION
PAVED SHOULDER OUTSIDE = 6 FT. (REQUIRES 12 FT.)
PAVED SHOULDER INSIDE = 2 FT. (REQUIRES 4 FT.)

USH 41

DEFICIENCY: VERTICAL CURVE
SPEED RATING = 50 MPH

DEFICIENCY: ACCELERATION TAPER
EXISTING LENGTH = 600 FT (REQUIRES 1200 FT)

DEFICIENCY: ACCESS SPACING
SEPARATION BETWEEN RAMP TERMINAL & ENTRANCE
EXISTING = 200 FT. DESIRABLE = 1000 FT.

DEFICIENCY: ACCESS SPACING
SEPARATION BETWEEN RAMP TERMINAL & SIDE ROAD
EXISTING = 400 FT. DESIRABLE = 1000 FT.

WISCONSIN DEPARTMENT OF TRANSPORTATION

EarthTech
A tyco International Ltd. Company

N

SCALE 0' 100' 200'

EXHIBIT 10

MARCH 2007

ENVIRONMENTAL SCREENING ANALYSIS
ALTERNATIVE 1

USH 41 and STH 47 Interchange
Outagamie County

Environmental Factor	Potential Impact Level				Comments
	High	Med	Low	NA	
Socio-Economic Factor					
Displacements				X	No displacements required
Natural Environment Factors					
Wetlands				X	None in project area
Streams and Floodplains				X	None in project area
Lakes or Other Open Water				X	None in project area
Threatened and Endangered Species			X		Threatened species exist in project area
Cultural Environmental Factors					
Section 4(f) and 6(f): Parks, Wildlife Refuge Areas				X	None in project area
Historic Resources				X	None in project area
Archaeological Resources				X	None in project area
Hazardous Substances or USTs				X	No known open LUST or ERP sites

ENVIRONMENTAL SCREENING ANALYSIS
SHORT-TERM ALTERNATIVE 1

USH 41 and STH 47 Interchange
Outagamie County

Environmental Factor	Potential Impact Level				Comments
	High	Med	Low	NA	
Socio-Economic Factor					
Displacements				X	No displacements required
Natural Environment Factors					
Wetlands				X	None in project area
Streams and Floodplains				X	None in project area
Lakes or Other Open Water				X	None in project area
Threatened and Endangered Species			X		Threatened species exist in project area
Cultural Environmental Factors					
Section 4(f) and 6(f): Parks, Wildlife Refuge Areas				X	None in project area
Historic Resources				X	None in project area
Archaeological Resources				X	None in project area
Hazardous Substances or USTs				X	No known open LUST or ERP sites

ENVIRONMENTAL SCREENING ANALYSIS
LONG-TERM ALTERNATIVE 3

USH 41 and STH 47 Interchange
Outagamie County

Environmental Factor	Potential Impact Level				Comments
	High	Med	Low	NA	
Socio-Economic Factor					
Displacements				X	No displacements required
Natural Environment Factors					
Wetlands				X	None in project area
Streams and Floodplains				X	None in project area
Lakes or Other Open Water				X	None in project area
Threatened and Endangered Species			X		Threatened species exist in project area
Cultural Environmental Factors					
Section 4(f) and 6(f): Parks, Wildlife Refuge Areas				X	None in project area
Historic Resources				X	None in project area
Archaeological Resources				X	None in project area
Hazardous Substances or USTs				X	No known open LUST or ERP sites

USH 41 and STH 96
Outagamie County
Interchange Study Report



Backbone Interchange Needs and Improvement Study

Prepared for:

Wisconsin Department of Transportation
Northeast Region and
Division of Transportation Investment Management
Bureau of State Highway Programs

Prepared by:

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April 2007

WisDOT Project No. 1111-11-99
Earth Tech Project No. 91355

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4 Average Daily Traffic Volumes - Existing, 2020 and 2035
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6 Short-Term Alternative 1 Layout
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11 Interchange Geometric Deficiency Layout
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A Interchange Analysis Methodology

B Initial Data

C No-Build Operational Analysis

D Crash Analysis

E Geometric Deficiency Analysis

F Alternative Operational Analysis

G Alternative Impacts Data

H Crash Benefit Data

I Construction Cost Estimates

J Project Meeting Minutes

USH 41 AND STH 96 INTERCHANGE SUMMARY

INTRODUCTION

This report presents the results of a comprehensive evaluation of the USH 41 and STH 96 (West Wisconsin Avenue) interchange in Outagamie County. A project location map is in Exhibit 3. The scope of the USH 41 and STH 96 interchange project study was to analyze the existing conditions and future needs, and identify improvement alternatives to address the needs.

The USH 41 and STH 96 interchange study is part of the overall Backbone Interchange Needs and Improvement Study (Backbone Study) which will include an evaluation of 25 interchanges on the Non-Southeast Corridors 2020 Backbone System. The study was completed for the WisDOT Bureau of State Highway Programs (BSHP) in the Division of Transportation Investment Management and the WisDOT Northeast Region. The purpose of the overall study is to assist the WisDOT Backbone Programming Committee in determining future interchange programming needs and prioritizing interchange improvement projects.

DEFICIENCY ANALYSIS

The existing USH 41 and STH 96 interchange was reviewed and analyzed for traffic operational, safety, geometric, and structural deficiencies. The interchange is operating over capacity and has operational problems in the peak hours. The most significant deficiency is that the southbound ramp terminal currently operates at LOS E during the afternoon peak hour, and by 2035 both terminals will operate at LOS F in the PM peaks.

There are an average of 50 crashes annually associated with the interchange. There are three severely high crash locations. The worst crash locations are the northbound and southbound ramps, with approximately 22.4 and 19.2 annual average crashes, respectively, and crash rates of 1.69 and 1.63, respectively. The northbound merge has an average of 5.8 annual crashes and a rate of 131. A summary of the existing geometric and operational deficiencies and the crash data is in Exhibits 10 and 11.

The interchange has several geometric deficiencies. The northbound on-ramp's acceleration taper is 400 feet less than desirable. STH 96 has severe access spacing deficiencies east of the northbound ramp terminal intersections and west of the southbound ramp terminal intersection with STH 96. East of the interchange, three access points are within 400 feet of the ramp terminals. The distance between ramp gores from the STH 125 interchange to the STH 96 interchange is 1,500 feet. Two access points are within 700 feet of the southbound ramp terminal west of the interchange.

ALTERNATIVES

Earth Tech and the WisDOT Northeast Region jointly explored several possible alternatives and developed one short-term alternative and two long-term alternatives for further evaluation in accordance with the Backbone Study criteria. Earth Tech completed operational and safety analysis and developed cost estimates for these alternatives consistent with the approach used on all other interchanges in the Backbone Study. A summary of the alternative layouts and evaluation is in Exhibit 1. A cost estimate summary is in Exhibit 2.

Please note that while all alternatives include both northbound and southbound auxiliary lanes on USH 41 between STH 125 and STH 96, the costs for these two lanes were divided between the STH 125 alternatives and the STH 96 interchange alternatives. The costs for the northbound auxiliary lane were included in the STH 96 alternative costs, and the costs for the southbound auxiliary lane were included in the STH 125 alternative costs.

Short-Term Alternative 1: Improvements - $2,100,000

Short-Term Alternative 1 improves the most significant existing and future capacity problems including capacity and safety on the northbound and southbound ramp terminals and USH 41 weaving between STH 125 and STH 96. Short-Term Alternative 1 (shown on Exhibit 6) and the auxiliary lane (shown on Exhibit 9) include:

- Auxiliary lanes on USH 41 northbound and southbound from STH 125 to STH 96.
- Implementing a new phasing concept and retiming the traffic signals at the northbound and southbound ramp terminal intersections with TTI phasing.
- Constructing a raised median between the northbound ramp terminal and Westhill Boulevard to restrict left turns onto STH 96.

Advantages

- Improved LOS and safety due to the signal phasing change.
- Decrease in weaving and improved freeway flow on USH 41.
- Significantly improved safety on STH 96 with the raised median and access restrictions.

Disadvantages

- Does not provide adequate operations for 2035.
- Does not address the severe crash rate at the northbound merge.

Long-Term Alternative 2: Improvements - $9,410,000

Long-Term Alternative 2 addresses all existing and projected operational and safety problems through 2035 at the interchange except the safety problem at the northbound merge onto USH 41. Long-Term Alternative 2 (shown on Exhibit 7) includes all the improvements proposed in Short-Term Alternative 1 and also includes:

- Reconstruction of STH 96 through the interchange to have four through lanes plus single right turn lanes and dual look ahead left turn lanes at the ramp terminal intersections.
- Reconstruction of both on-ramps to provide two lanes.
- Adding a second exiting lane at the northbound off-ramp.
- Provide 350-foot dual left and dual right turn lanes at the southbound ramp.
- Provide 210-foot dual left and dual right turn lanes at the northbound ramp.

Advantages

- Addresses the worst operational and safety deficiencies on STH 96 and the off-ramps through 2035.
- Significantly improves LOS, ramp intersection safety, and STH 96 safety problems.

Disadvantages

- Does not address the severe crash rate at the northbound merge.
- One commercial displacement.

Long-Term Alternative 3: Improvements - $10,140,000

Long-Term Alternative 3 fully addresses all existing and projected operational and safety problems through 2035 at the interchange. Long-Term Alternative 3 (shown in Exhibit 8) includes all the improvements proposed in Long-Term Alternative 2 and also includes:

- Extending the northbound on-ramp acceleration taper lane 400 feet.
- Widening the existing railroad bridge on USH 41 north of the northbound on-ramp.

Advantages

- Fully addresses the major operational and safety deficiencies through 2035.

Disadvantages

- One commercial displacement.

USH 41 AND STH 96 INTERCHANGE STUDY
OUTAGAMIE COUNTY

STUDY OVERVIEW

This report presents the results of a comprehensive operational evaluation of the USH 41 and STH 96 interchange located in the Town of Grand Chute, Outagamie County, Wisconsin. The study area for this interchange includes USH 41 from ½ mile south of STH 96 to ½ mile north of STH 96 and STH 96 (West Wisconsin Avenue) from CTH GV east to Westhill Boulevard. This interchange study was completed in coordination with the USH 41 and STH 125 interchange study, 1 mile to the south.

USH 41 is a WisDOT Corridors 2020 Backbone route. STH 96 is a rural principal arterial in the Appleton urbanized area. USH 41 is constructed as a freeway and STH 96 is constructed as a four lane divided urban street.

This interchange evaluation is part of the Backbone Interchange Needs and Improvement Study (Backbone Study) initiated by the Wisconsin Department of Transportation (WisDOT) Backbone Programming Committee. The study was completed for the WisDOT Bureau of State Highway Programs (BSHP) in the Division of Transportation Investment Management and the Northeast Region. The purpose of the overall study is to assist the WisDOT Backbone Programming Committee in determining future interchange programming needs and prioritizing interchange improvement projects on the Non-Southeast Corridors 2020 Backbone System.

Each WisDOT Region identified existing interchanges and future interchange locations for evaluation in the overall project. Earth Tech evaluated each of the 25 interchanges using a standard process to provide consistent results across diverse geographic and functional interchanges. For each interchange the evaluation included:

- Inventory and evaluation of the existing interchanges, including mainline highway, cross roads, and bridges
- Operational analysis of existing and forecasted traffic conditions
- Identification of existing operational, geometric, and safety deficiencies
- Development and evaluation of alternatives to address deficiencies and future traffic needs
- Development of detailed cost estimates for each alternative
- Providing evaluation data to WisDOT for use in prioritizing the interchange projects
- Coordinating with the WisDOT Region throughout the study

After completion of the individual interchange evaluations, BSHP will score each interchange and present the information to the Backbone Programming Committee for review, prioritization, and programming of future interchange improvement projects. The study was a planning level study and did not include detailed geometric design, detailed environmental evaluation, or public involvement.

INTERCHANGE ANALYSIS APPROACH

The standard interchange analysis methodology used for all interchanges in the Backbone Study is described in detail in Appendix A. Earth Tech and the WisDOT Northeast Region jointly explored several possible alternatives and developed one short-term alternative and two long-term alternatives for further evaluation in accordance with the Backbone Study criteria.

Earth Tech performed an independent evaluation of the three alternatives for the USH 41 and STH 96 study that included the following:

- Perform operational analysis on the interchange merge, diverge, and ramp terminal areas for no-build and each alternative. The years analyzed include existing, 2020, and 2035.
- Complete crash analyses for the interchange merge, diverge, and ramp terminal influence areas for years 2000 to 2004.
- Determine geometric deficiencies for the freeway, ramps, and ramp terminal segments using as-built plans provided by WisDOT.
- Provide cost estimates using the Backbone Study cost estimating methodology.
- Develop crash benefits for each alternative and provide an estimated crash reduction assuming existing crash rates.

The Backbone Study included extensive coordination with the WisDOT regions. Project meeting minutes are in Appendix J.

DEFICIENCY ANALYSIS OF EXISTING SYSTEM

A summary of the existing geometric and operational deficiencies is in Exhibit 10. Exhibit 11 shows specific geometric deficiencies. Data used for the interchange deficiency analysis is in Appendix B.

Traffic Forecasts

The traffic forecast for the Backbone Study was developed by HNTB from the current Appleton Metropolitan Planning Organization (MPO) travel demand model. The turning movement counts used for the traffic forecasts were taken in February and March 2005. These counts are used in the traffic forecast to determine future hourly peak traffic volumes. Based on knowledge of seasonal traffic patterns at these interchanges, Earth Tech and the Northeast Region determined that the existing counts and traffic forecasts are not representative of the interchange traffic volumes throughout the year.

Based on discussions with the Region and ATR data located south of this project, the ramp terminal counts, including existing count volumes and forecast volumes were increased by 20 percent. The K30 traffic volumes were used to analyze USH 41 basic freeway segments.

Average daily traffic volumes for existing year, 2020, and 2035 are shown in Exhibit 4. Peak hour volumes, including turning movements, for existing year, 2020, and 2035 are shown in Exhibit 5.

Operational Analysis

Operational analysis included LOS analysis at all freeway and ramp terminal segments of the USH 41 and STH 96 interchange. We analyzed the existing interchange layout with forecasted traffic volumes for AM and PM peak hours for years 2020 and 2035. K30 traffic volumes were used to analyze USH 41 basic freeway segments on each side of the interchange. The existing interchange layout operates poorly at the northbound and southbound off-ramps in 2020. In the 2035 scenario, the northbound and southbound off-ramp terminals operate at LOS F during the PM peak hour. LOS results for the freeway segments are in Table 1. LOS results for the ramp terminal intersections are shown in Table 2. Details of the no-build operational analysis are in Appendix C.

Table 1

FREEWAY LEVEL OF SERVICE NO-BUILD CONDITIONS							
Year	**Location**	**NB Diverge**	**NB Merge**	**SB Diverge**	**SB Merge**	**Freeway North of STH 96**	**Freeway South of STH 96**
	Type of HCS Analysis	**Ramp Junction**	**Ramp Junction**	**Ramp Junction**	**Ramp Junction**	**K30**	**K30**
Existing	**AM**	B	B	C	B	C	C
	PM	C	B	B	B		
2020	**AM**	B	B	C	C	C	C
	PM	C	C	C	B		
2035	**AM**	C	B	C	C	D	D
	PM	C	C	C	C		

Table 2

INTERSECTION LEVEL OF SERVICE NO-BUILD CONDITIONS																
Location	Analysis Year	Peak Hour	Overall Intersection	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
NB Ramps Terminal	Existing	AM	B	A	A	--	--	B	A	C	C	B	--	--	--
		PM	D	E	A	--	--	C	A	D	D	B	--	--	--
	2020	AM	C	A	A	--	--	C	A	C	C	B	--	--	--
		PM	D	E	A	--	--	D	F	D	D	B	--	--	--
	2035	AM	D	B	A	--	--	C	A	C	C	B	--	--	--
		PM	F	F	A	--	--	F	F	D	D	C	--	--	--
SB Ramps Terminal	Existing	AM	B	--	B	A	C	A	--	--	--	--	D	D	A
		PM	E	--	D	A	C	A	--	--	--	--	D	D	B
	2020	AM	C	--	C	A	C	A	--	--	--	--	D	D	B
		PM	E	--	E	C	C	A	--	--	--	--	D	D	C
	2035	AM	C	--	C	A	D	A	--	--	--	--	D	D	B
		PM	F	--	F	F	C	A	--	--	--	--	E	E	C

Queues from the signalized ramp terminal intersections at both the northbound and southbound off-ramps do not extend past the gores for either the 2020 or 2035 scenarios; the queues in 2035 at the southbound off-ramp will extend to nearly 75 percent of the length of the ramp, creating a safety problem. Maximum queue lengths are shown in Table 3.

Table 3

RAMP TERMINAL QUEUE LENGTHS NO-BUILD CONDITIONS				
	Distance from Terminal to Gore	Existing	2020	2035
NB Off-Ramp	1,250 ft	301 ft	318 ft	342 ft
SB Off-Ramp	1,000 ft	382 ft	571 ft	722 ft

Crash Analysis

We completed a crash analysis for the two merge influence areas, two diverge influence areas, and two ramp terminal alternatives from years 2000 to 2004. We calculated crash rates and severity for each year at each interchange influence area. An estimated 251 crashes occurred at the merge area, diverge area, and ramp segments of the USH 41 and STH 96 interchange from 2000 to 2004. Eighty-three percent of these crashes occurred at the signalized ramp terminals. Average annual crash rates and crash severity are shown in Table 4. A summary of the crash data is in Exhibit 10. Details of the crash analysis are in Appendix D. See Appendix A for descriptions of the influence areas.

The crash rates of 1.63 and 1.69 at the ramp terminal intersections are very high. The high crash rates are likely caused by queues on STH 96 at ramp terminals that spill back into the upstream ramp terminal. Left turning vehicles attempt to turn through the queues without being able to see through traffic, causing crashes. Each ramp terminal also has characteristics that may contribute to the high crash rates. The southbound off-ramp has a crest vertical curve that has a speed rating of 52 mph and 500 feet of stopping sight distance. The northbound ramp terminal has very close side road spacing along STH 96 to the east.

The northbound merging junction also has a high crash rate. Although statewide crash data at ramp junctions is not available, data compiled through this Backbone Study indicates that crash rates over 60 are higher than average. A likely cause of the high crash rate is 2,700 feet from the gore of the northbound merge is a northbound lane drop at the off-ramp to STH 15. The lane drop in conjunction with the deficient acceleration length and deficient vertical curve on the northbound merge is creating an unsafe condition.

Table 4

CRASH HISTORY USH 41 AND STH 96 INTERCHANGE						
Location	Year	Crash Type			Average Annual Crash Rate	Crash Severity
		PDO	Injury	Fatal		
Northbound Diverge (HMVMT)	2000-2004	3	0	0	16	0.00
Northbound Merge (HMVMT)	2000-2004	19	10	0	131	0.34
Southbound Diverge (HMVMT)	2000-2004	1	0	0	4	0.00
Southbound Merge (HMVMT)	2000-2004	11	2	0	73	0.15
NB Ramps (MVE)	2000-2004	71	41	0	1.69	0.37
SB Ramps (MVE)	2000-2004	55	40	1	1.63	0.43
Totals	2000-2004	160	93	1	---	---

Geometric and Structural Analysis

WisDOT provided the following as-built plans, which were used as the starting point for the geometric and structural analysis (As-built plan sheets are in Appendix B):

- WisDOT ID Number: 1123-05-71,72 - 1991
- WisDOT ID Number: 1517-2-71 - 1979
- WisDOT ID Number: 1502-1-71,72 - Year Unknown
- WisDOT ID Number: 4657-05-71 - 2001
- WisDOT ID Number: 1120-33-60 - 1984 and 2006 Revision

The interchange has several geometric deficiencies. The northbound on-ramp's acceleration taper is 400 feet less than desirable. STH 96 has severe access spacing deficiencies east of the northbound ramp terminal intersections and west of the southbound ramp terminal intersection with STH 96. East of the interchange, three access points are within 400 feet of the ramp terminals. The distance between ramp gores from the STH 125 interchange to the STH 96 interchange is 1,500 feet. Two access points are within 700 feet of the southbound ramp terminal west of the interchange. The existing geometric deficiencies are summarized in Exhibits 10 and 11. Details of the geometric analysis are in Appendix E.

ALTERNATIVE EVALUATION

The main objective for the three improvement alternatives was to correct the existing and projected operational and safety deficiencies. In all three alternatives, capacity was added for the southbound and northbound off-ramp movements, and the long-term alternatives also add capacity to STH 96. Earth Tech analyzed the alternatives, with the results presented in this report. An overall summary of the alternatives and their evaluation results is in Exhibit 1.

We completed operational analysis for the short-term alternative in forecast year 2020 and long-term alternatives in forecast year 2035. Throughout the alternative evaluation, we reviewed right-of-way plans, utility plans, and completed environmental screenings for each alternative. We also estimated crash benefits and construction costs.

Please note that while all alternatives include both northbound and southbound auxiliary lanes on USH 41 between STH 125 and STH 96, the costs for these two lanes were divided between the STH 125 alternatives and the STH 96 interchange alternatives. The costs for the northbound auxiliary lane were included in the STH 96 alternative costs, and the costs for the southbound auxiliary lane were included in the STH 125 alternative costs.

Short-Term Alternative 1

Short-Term Alternative 1 improves traffic operations and safety at the interchange ramp terminals on STH 96 to the east of the northbound ramp terminal, and on USH 41 between STH 125 and STH 96, but does not address the safety issue at the northbound merge. The proposed Short-Term Alternative 1 improvements include implementing a new traffic signal phasing concept and retiming the northbound and southbound ramp terminal intersection traffic signals using existing hardware. The new phase sequence is TTI four-phase, similar to the phasing installed at STH 125 in 2002. Short-Term Alternative 1 also includes moving the Fox River Tractor Company driveway to the east edge of their property and prohibiting left turns out of the driveway. Northbound and southbound auxiliary lanes are added on USH 41 between STH 125 and STH 96.

Short-Term Alternative 1 is shown on Exhibits 6 and 9.

Operational Analysis

The signal phasing change greatly decreases average delay and improves LOS. In 2020 the overall LOS for the southbound ramp terminals will be LOS B and C for the AM and PM peaks and LOS C for the northbound ramp terminals in both peak times. The off-ramp queues in 2020 will be similar to the no-build 2020 scenario. All freeway and ramp segments will operate at LOS C or better during the peak periods of the 2020 analysis.

LOS results for the freeway segments are in Table 5. LOS results for the ramp terminals are shown in Table 6. Queue results for the ramp terminal intersections are shown in Table 7. Operational analysis details are in Appendix F.

Table 5

FREEWAY LEVEL OF SERVICE SHORT-TERM ALTERNATIVE 1					
Year	Location	NB Weave	NB Merge	SB Diverge	SB Weave
	Type of HCS Analysis	Ramp Junction	Ramp Junction	Ramp Junction	Ramp Junction
2020	AM	B	B	C	C
	PM	C	C	C	B

Table 6

INTERSECTION LEVEL OF SERVICE SHORT-TERM ALTERNATIVE 1															
Location	Analysis Year	Peak Hour	Overall	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
NB Ramps	2020	AM	C	A	A	--	--	C	C	D	D	D	--	--	--
		PM	C	C	B	--	--	C	C	D	D	D	--	--	--
SB Ramps	2020	AM	B	--	C	C	A	A	--	--	--	--	D	D	D
		PM	C	--	D	C	C	A	--	--	--	--	D	D	D

Table 7

QUEUE RESULTS SHORT-TERM ALTERNATIVE 1		
	Distance from Terminal to Gore	2020
NB Off-Ramp	1,250 ft	373 ft
SB Off-Ramp	1,000 ft	505 ft

Impacts

Alternative impacts data is in Appendix G.

Right of Way

Short-Term Alternative 1 requires approximately 1.0 acre of right of way in areas currently under commercial and industrial usage. Right of way is required to construct the northbound auxiliary lane on USH 41 between the STH 125 on-ramp and the STH 96 off-ramp. Based on local real estate information, we estimate the right-of-way acquisition will cost approximately $200,000 per acre. No relocations are necessary, so the total right-of-way cost is estimated to be $200,000.

Utilities

The construction of the retaining wall on the east side of the northbound USH 41 auxiliary lane for Short-Term Alternative 1 may involve relocating the existing Town of Grand Chute sanitary sewer. In discussions with Town officials, they estimated $75,000 in compensable costs to move the sewer into the new right of way.

Environmental

Potential low environmental impacts include the extension of box culverts over Mud Creek, which is not in the floodplain; existing threatened species in the project area; and a known archaeological site assumed to be previously disturbed. The environmental screening analysis summary is in Exhibit 12.

Safety Benefits

The new auxiliary lanes on USH 41 are expected to reduce weaving between STH 125 and STH 96. Converting the STH 96 mountable median to raised immediately east of the northbound ramp interchange and updating the signal phasing to TTI will provide significant additional benefits. We estimate a 1,000 and 6,000 annual crash benefit from the addition of the northbound and southbound auxiliary lanes, respectively, and 162,000 for the conversion of the STH 96 east median to raised and the TTI phasing improvements. A summary of the crash reduction benefits is shown in Table 8. Details of the crash reduction benefits are in Appendix H.

Table 8

CRASH REDUCTION BENEFITS SHORT-TERM ALTERNATIVE 1							
	NB Weave	NB Merge	SB Diverge	SB Weave	NB Ramps	SB Ramps	Total
Short-Term Alternative 1	1	0	0	6	125	37	169

Note: Benefits expressed in thousands per year.

Construction Costs

The cost estimate for Short-Term Alternative 1 includes design, construction, right-of-way, and utility costs. The estimated cost for Short-Term Alternative 1 is $2,100,000. The cost estimate summary is in Exhibit 2, and the details of the cost estimate are in Appendix I.

Long-Term Alternative 2

This alternative addresses all existing and proposed safety and operational problems at the interchange, except the crash problem at the northbound merge onto USH 41. Long-Term Alternative 2 includes all the improvements from Short-Term Alternative 1 and includes major modifications to the interchange geometrics and capacity. Reconstruction of STH 96 through the interchange will include four through lanes, plus single right turn lanes and dual look ahead left turn lanes at the ramp terminal intersections. The eastbound right turn lane is a continuous auxiliary lane from the Mall exit to the southbound on-ramp. On each of the on-ramps, two lanes are provided to accommodate the two left and single right turn lanes onto the on-ramp.

The northbound off-ramp consists of 210-foot dual left and right turn lanes, and the southbound off-ramp terminal consists of 350-foot dual left and right turn lanes. Long-Term Alternative 2 is shown on Exhibits 7 and 9. A second exit lane is added from USH 41 to the northbound off-ramp.

Operational Analysis

Long-Term Alternative 2 provides the needed capacity in 2035 and off-ramp queues are acceptable. The northbound and southbound ramp terminals improve from LOS F in the no-build scenario to LOS C, in the PM peak. All other freeway segments will operate at LOS D or better during the peak periods of the 2035 analysis.

LOS results for the freeway segments are in Table 9. LOS results for the ramp terminals are shown in Table 10. Queue results for the ramp terminal intersections are shown in Table 11. Operational analysis details are in Appendix F.

Table 9

FREEWAY LEVEL OF SERVICE LONG-TERM ALTERNATIVE 2					
Year	Location	NB Weave	NB Merge	SB Diverge	SB Weave
	Type of HCS Analysis	Ramp Junction	Ramp Junction	Ramp Junction	Ramp Junction
2035	AM	C	B	C	C
	PM	C	C	C	C

Table 10

INTERSECTION LEVEL OF SERVICE LONG-TERM ALTERNATIVE 2																
Location	Analysis Year	Peak Hour	Overall	From West			From East			From South			From North			
				L	T	R	L	T	R	L	T	R	L	T	R	
NB Ramps	2035	AM	C	A	A	--	--	C	C	D	D	D	--	--	--	
		PM	C	A	B	--	--	D	D	D	D	D	--	--	--	
SB Ramps	2035	AM	B	--	B	B	A	A	--	--	--	--	D	D	D	
		PM	C	--	C	C	A	B	--	--	--	--	D	D	D	

Table 11

QUEUE RESULTS LONG-TERM ALTERNATIVE 2		
	Distance from Terminal to Gore	2035
NB Off-Ramp	1,250 ft	675 ft
SB Off-Ramp	1,000 ft	266 ft

Impacts

Alternative impacts data is in Appendix G.

Right of Way

Long-Term Alternative 2 requires 1.35 acres of right of way in areas currently under commercial and industrial usage. Based on local real estate information, we estimate the additional 0.35 acres of right-of-way acquisition will cost approximately $350,000 per acre. A commercial business relocation is necessary to add an additional lane to the south side of STH 96, east of the southbound ramp terminal intersection. Based on the relocation and additional right of way, the total right-of-way cost is estimated to be $670,000.

Utilities

Construction of the additional lane on the south side of STH 96, west of the interchange, may involve relocating the existing Town of Grand Chute sanitary sewer and water main located within a casing pipe. In addition, relocating a WE Energies gas main to construct the new STH 96 westbound right turn lane onto the northbound on-ramp may be required. Due to lack of feedback from the Town and WE Energies, an estimated $180,000 and $20,000 in compensable costs to move the utilities into the new right of way was included, respectively. Including the costs to move the sanitary sewer for the northbound USH 41 auxiliary lane, the total utility costs for this alternative is $275,000.

Environmental

Potential low environmental impacts include the extension of box culverts over Mud Creek, which is not in the floodplain; existing threatened species in the project area; and a known archaeological site assumed to be previously disturbed. A commercial business may need to be relocated to accommodate the realigned STH 96. The environmental screening analysis summary is in Exhibit 12.

Safety Benefits

The addition of the auxiliary lanes on USH 41 and the added and lengthened turn lanes throughout the interchange result in significant safety benefits and 393,000 in savings. A summary of the crash reduction benefits for Long-Term Alternative 2 is shown in Table 12. Details of the crash reduction benefits are in Appendix H.

Table 12

CRASH REDUCTION BENEFITS LONG-TERM ALTERNATIVE 2							
	NB Diverge	NB Weave	SB Weave	SB Merge	NB Ramps	SB Ramps	Total
Long-Term Alternative 2	1	0	0	6	223	163	393

Note: Benefits expressed in thousands per year.

Construction Costs

The cost estimate for Long-Term Alternative 2 includes design, construction, right-of-way, and utility costs. The estimated cost for Long-Term Alternative 2 is $9,410,000. The cost estimate summary is in Exhibit 2, and the details of the cost estimate are in Appendix I.

Long-Term Alternative 3

This alternative fully addresses all operational and safety concerns currently experienced and projected at the interchange and is considered an ultimate long-term solution. Long-Term Alternative 3 includes all identified improvements from Short-Term Alternative 1 and Long-Term Alternative 2. In addition, the northbound merge acceleration taper will be extended to meet desirable standards. The northbound acceleration taper extension involves widening the existing Canadian National railroad structure on USH 41 immediately north of the interchange. Long-Term Alternative 3 is shown on Exhibits 8 and 9.

Operational Analysis

Long-Term Alternative 3 provides the needed capacity in 2035 and off-ramp queues are acceptable. The northbound and southbound ramp terminals improve from LOS F in the no-build scenario to LOS C, in the PM peak. All other freeway segments will operate at LOS D or better during the peak periods of the 2035 analysis.

LOS results for the freeway segments are in Table 13. LOS results for the signalized ramp terminals are shown in Table 14. Queue results for the ramp terminal intersections are shown in Table 15. Operational analysis details are in Appendix F.

Table 13

FREEWAY LEVEL OF SERVICE LONG-TERM ALTERNATIVE 3					
Year	Location	NB Weave	NB Merge	SB Diverge	SB Weave
	Type of HCS Analysis	Ramp Junction	Ramp Junction	Ramp Junction	Ramp Junction
2035	AM	C	B	C	C
	PM	C	C	C	C

Table 14

INTERSECTION LEVEL OF SERVICE LONG-TERM ALTERNATIVE 3															
Location	Analysis Year	Peak Hour	Overall	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
NB Ramps	2035	AM	C	A	A	--	--	C	C	D	D	D	--	--	--
		PM	C	A	B	--	--	D	D	D	D	D	--	--	--
SB Ramps	2035	AM	B	--	B	B	A	A	--	--	--	--	D	D	D
		PM	C	--	C	C	A	B	--	--	--	--	D	D	D

Table 15

QUEUE RESULTS LONG-TERM ALTERNATIVE 3		
	Distance from Terminal to Gore	2035
NB Off-Ramp	1,250 ft	675 ft
SB Off-Ramp	1,000 ft	266 ft

Impacts

Alternative impacts data is in Appendix G.

Right of Way

Long-Term Alternative 3 requires 1.35 acres of right of way in areas currently under commercial and industrial usage. Based on local real estate information, we estimate the additional 0.35 acres of right-of-way acquisition will cost approximately $350,000 per acre. A commercial business relocation is necessary to add an additional lane to the south side of STH 96, east of

the southbound ramp terminal intersection. Based on the relocation and additional right of way, the total right-of-way cost is estimated to be $670,000.

Utilities

Construction of the additional lane on the south side of STH 96, west of the interchange, may involve relocating the existing Town of Grand Chute sanitary sewer and water main located within a casing pipe. In addition, relocating a WE Energies gas main to construct the new STH 96 westbound right turn lane onto the northbound on-ramp may be required. Due to lack of feedback from the Town and WE Energies, an estimated $180,000 and $20,000 in compensable costs to move the utilities into the new right of way was included, respectively. Including the costs to move the sanitary sewer for the northbound USH 41 auxiliary lane, the total utility costs for this alternative is $275,000.

Environmental

Potential low environmental impacts include the extension of box culverts over Mud Creek, which is not in the floodplain; existing threatened species in the project area; and a known archaeological site assumed to be previously disturbed. A commercial business may need to be relocated to accommodate the realigned STH 96. The environmental screening analysis summary is in Exhibit 12.

Safety Benefits

The addition of the auxiliary lanes throughout the interchange results in significant safety benefits at both intersections, resulting in 393,000 in savings. Long-Term Alternative 3 adds the benefit of extending the northbound merge taper resulting in 10,000 in annual savings. A summary of the crash reduction benefits for Long-Term Alternative 3 is shown in Table 16. Details of the crash reduction benefits are in Appendix H.

Table 16

CRASH REDUCTION BENEFITS LONG-TERM ALTERNATIVE 3							
	NB Diverge	NB Weave	SB Weave	SB Merge	NB Ramps	SB Ramps	Total
Long-Term Alternative 3	1	10	0	6	223	163	403

Note: Benefits expressed in thousands per year.

Construction Costs

The cost estimate for Long-Term Alternative 3 includes design, construction, right-of-way, and utility costs. The estimated cost for Long-Term Alternative 3 is $10,140,000. The cost estimate summary is in Exhibit 2, and the details of the cost estimate are in Appendix I.

Other Alternatives Considered

An additional considered alternative involved extending a frontage road from Westhill into the Fox River Tractor Company and closing their existing entrance off STH 96. Due to existing capacity concerns at this intersection with STH 96, the Region recommended removing this alternative from consideration.

Exhibits

WisDOT Backbone Needs and Improvement Study

EarthTech
A Tyco International Ltd. Company

EXHIBIT 1 - INTERCHANGE EVALUATION SUMMARY

USH 41 and STH 96 INTERCHANGE

Outagamie County

EXHIBIT 1
WisDOT ID 1111-11-99
March 2007

ALTERNATIVES CHARACTERISTICS	NO-BUILD ALTERNATIVE	SHORT-TERM ALTERNATIVE 1	LONG-TERM ALTERNATIVE 2	LONG-TERM ALTERNATIVE 3
DESCRIPTION	> Existing interchange configuration	> Auxiliary lanes on USH 41 between STH 125 and STH 96 > Adding a 2nd exit lane at the NB off-ramp > Implements a new signal phasing concept and retiming the NB and SB ramp terminal intersections with TTI phasing, similar to existing STH 125 phasing > Constructs a raised median between NB ramp terminal and Westhill Blvd > Moving the Fox River Tractor Co. driveway east to allow left turns in	> Includes Short-Term Alternative 1 improvements > Reconstruction of STH 96 through the interchange to have 4 through lanes plus single right turn lanes and dual look ahead left turn lanes at the ramp terminal intersections > Reconstruction of both on-ramps to provide dual lanes > Provide 350-foot dual left and dual right turn lanes on the SB ramp > Provide 210-foot dual left and dual right turn lanes on the NB ramp terminal	> Includes Short-Term Alternative 1 improvements > Includes Long-Term Alternative 2 improvements > Extend NB on-ramp acceleration taper to desired length > Widen the existing railroad bridge on USH 41 north of the NB on-ramp
TOTAL COSTS		> $2.10 million	> $9.40 million	> $10.14 million
TRAFFIC OPERATIONS	> SB ramp terminal at LOS E today and LOS F in 2035 > NB ramp terminal at LOS D today and LOS F in 2035 > All 4 freeway ramp junctions are LOS C or better through 2035 > SB off-ramp queue within 300 ft of gore in 2035	> Improves worst existing operational and safety deficiencies through 2020 > SB ramp terminal LOS C in 2020 > NB ramp terminal LOS C in 2020 > Queues on ramps acceptable in 2020	> Addresses worst operational and safety deficiencies through 2035 on STH 96 and the off-ramps > SB ramp terminal LOS C in 2035 > NB ramp terminal LOS C in 2035 > Queues on ramps acceptable in 2035	> Improves worst existing operational and safety deficiencies through 2035 > SB ramp terminal LOS C in 2035 > NB ramp terminal LOS C in 2035 > SB off-ramp queue reduced to 266 ft. in 2035
CRASHES and SAFETY	> Average 50 crashes annually > Highest crash locations are the NB and SB ramp terminals with 22.4 and 19.2 crashes annually and the NB Merge with 5.8 annual crashes > Crash rates exceed action thresholds	> Annual crash benefit - 169,000 > Creating raised median on STH 96 and phasing and timing change at both ramp terminals should significantly reduce crashes through 2020	> Annual crash benefit - 393,000 > Increased capacity at ramp terminals, and raised median on STH 96, should significantly reduce crashes through 2035	> Annual crash benefit - 403,000 > Increased capacity at ramp terminals should reduce crashes > Extending NB on-ramp acceleration taper should reduce crashes
GEOMETRIC and ACCESS SPACING	> STH 96 severe access spacing deficiencies east and west of interchange > NB on-ramp acceleration taper is 400 ft short > Distance between STH 125 and STH 96 ramps is only 1,500 ft	> Access spacing east of USH 41 is greatly improved, although deficiencies remain. > Auxiliary lane addresses interchange spacing deficiency > No change to deficient NB acceleration length	> Fully addresses all geometric and access spacing deficiencies except the NB on-ramp merge > Improved access spacing is still less than desirable	> Fully addresses all geometric and access spacing deficiencies > Improved access spacing is still less than desirable > Extend NB on-ramp acceleration taper to desired length
BRIDGES	> Sufficiency rating = 96.7 EB and 96.7 WB	> No changes	> No changes	> Widen the existing railroad bridge on USH 41 north of the NB on-ramp
RIGHT OF WAY and UTILITIES IMPACTS		> Moderate R/W and utility impacts > 1.0 acres R/W > Total cost $200,000 > Move Grand Chute Sewer at a cost of $75,000	> Major R/W and Utility impacts > 1.35 acre R/W > Commercial Business relocation > Total R/W cost $670,000 > Move Grand Chute Sewer and Water and WE Energies gas main at a cost of $275,000	> Major R/W and Utility impacts > 1.35 acre R/W > Commercial Business relocation > Total R/W cost $670,000 > Move Grand Chute Sewer and Water and WE Energies gas main at a cost of $275,000
ENVIRONMENTAL IMPACTS		> Potential low impact to Mud Creek for box culvert extensions > Threatened species exist in project area > Known arch site exists, assumed previously disturbed	> Potential low impact to Mud Creek for box culvert extensions > Threatened species exist in project area > Known arch site exists, assumed previously disturbed > Commercial Business relocation	> Potential low impact to Mud Creek for box culvert extensions > Threatened species exist in project area > Known arch site exists, assumed previously disturbed > Commercial Business relocation
ADVANTAGES		> Addresses worst operational and safety deficiencies through 2020 > Raised median significantly improves safety on STH 96 > Majority of improvements will remain in Long-Term Alternatives 2 and 3	> Fully improves all but one operational and safety deficiency through 2035 > Ramp terminal intersections will operate at a much improved LOS > Raised median significantly improves safety on STH 96	> Fully improves all operational and safety deficiencies through 2035 > Ramp terminal intersections will operate at a much improved LOS > Raised median significantly improves safety on STH 96
DISADVANTAGES	> Existing severe operational deficiencies at ramp terminals will get much worse > Existing ramp taper deficiency will remain > Crashes will increase	> Operational and safety benefits deteriorate after 2020	> One commercial displacement	> One commercial displacement
CONCLUSIONS and RECOMMENDATIONS	> Not recommended	> Provides significant benefit for reasonable cost	> Addresses majority of deficiencies and provides good mobility and safety through 2035	> Addresses all deficiencies and provides good mobility and safety through 2035

US 41/STH 96 Interchange
Cost Estimate Summary
Backbone Interchanges Needs and Improvements Study

SHORT TERM ALTERNATIVE 1 PROJECT SEGMENT	STRUCT. COST	CONST. COST *	R/W COST **	ENGR. COST	TOTAL COST ***
NB USH 41 AUXILIARY LANE	$ 385,000	$ 1,275,000	$ 275,000	$ 280,000	**$ 1,830,000**
REALIGNED FOX RIVER TRACTOR DRIVEWAY	$ -	$ 55,000	$ -	$ 12,000	**$ 70,000**
STH 96 RAISED MEDIAN & LEFT TURN LANE	$ -	$ 157,000	$ -	$ 35,000	**$ 200,000**
TOTAL PROJECT COST					**$ 2,100,000**

LONG TERM ALTERNATIVE 2 PROJECT SEGMENT	STRUCT. COST	CONST. COST *	R/W COST **	ENGR. COST	TOTAL COST ***
NB USH 41 AUXILIARY LANE	$ 385,000	$ 1,275,000	$ 275,000	$ 280,000	**$ 1,830,000**
REALIGNED FOX RIVER TRACTOR DRIVEWAY	$ -	$ 55,000	$ -	$ 12,000	**$ 70,000**
STH 96 RAISED MEDIAN & LEFT TURN LANE	$ -	$ 157,000	$ -	$ 35,000	**$ 200,000**
NB OFFRAMP (2 LANES)	$ 30,000	$ 311,000	$ -	$ 69,000	**$ 380,000**
NB OFFRAMP (4 LANES)	$ -	$ 313,000	$ -	$ 69,000	**$ 390,000**
SB OFFRAMP (2 LANES)	$ -	$ 262,000	$ -	$ 57,000	**$ 320,000**
SB OFFRAMP (4 LANES)	$ -	$ 311,000	$ -	$ 69,000	**$ 380,000**
NB ONRAMP	$ -	$ 188,000	$ -	$ 41,000	**$ 230,000**
SB ONRAMP	$ -	$ 197,000	$ -	$ 44,000	**$ 250,000**
STH 96 EB RIGHT TURN LANE	$ -	$ 330,000	$ 635,000	$ 73,000	**$ 1,040,000**
STH 96 EB LOOK AHEAD LEFT TURN LANES	$ -	$ 430,000	$ -	$ 95,000	**$ 530,000**
STH 96 EB THRU LANES	$ 60,000	$ 920,000	$ -	$ 202,000	**$ 1,130,000**
STH 96 EB RIGHT TURN LANE INTO ?	$ -	$ 290,000	$ -	$ 64,000	**$ 360,000**
STH 96 WB RIGHT TURN INTO NB ONRAMP	$ -	$ 150,000	$ 35,000	$ 34,000	**$ 220,000**
STH 96 WB LOOK AHEAD LEFT TURN LANES	$ -	$ 430,000	$ -	$ 95,000	**$ 530,000**
STH 96 WB THRU LANES	$ 60,000	$ 920,000	$ -	$ 202,000	**$ 1,130,000**
STH 96 WB LEFT TURN LANES INTO MALL DRIVE	$ -	$ 340,000	$ -	$ 75,000	**$ 420,000**
TOTAL PROJECT COST					**$ 9,410,000**

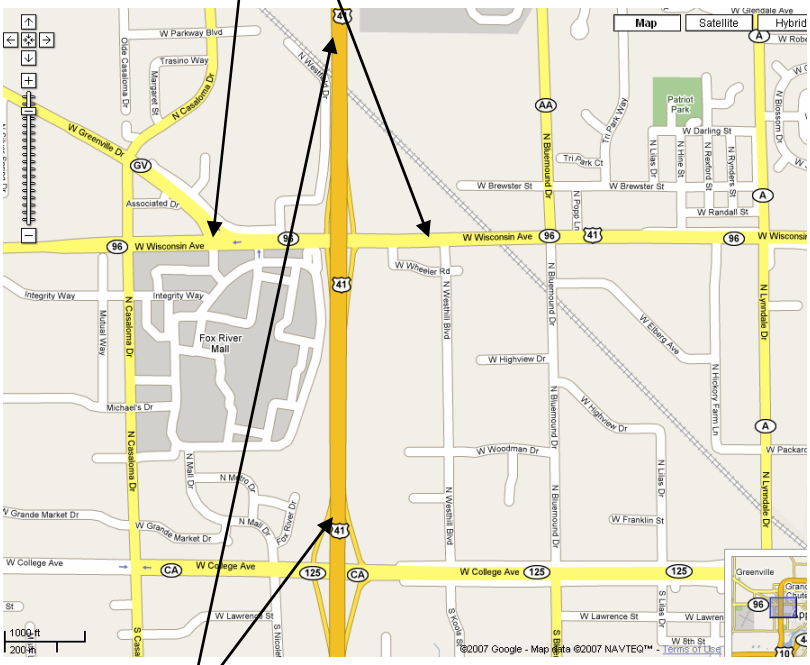
LONG TERM ALTERNATIVE 3 PROJECT SEGMENT	STRUCT. COST	CONST. COST *	R/W COST **	ENGR. COST	TOTAL COST ***
NB USH 41 AUXILIARY LANE	$ 385,000	$ 1,275,000	$ 275,000	$ 280,000	**$ 1,830,000**
REALIGNED FOX RIVER TRACTOR DRIVEWAY	$ -	$ 55,000	$ -	$ 12,000	**$ 70,000**
STH 96 RAISED MEDIAN & LEFT TURN LANE	$ -	$ 157,000	$ -	$ 35,000	**$ 200,000**
NB OFFRAMP (2 LANES)	$ 30,000	$ 311,000	$ -	$ 69,000	**$ 380,000**
NB OFFRAMP (4 LANES)	$ -	$ 313,000	$ -	$ 69,000	**$ 390,000**
SB OFFRAMP (2 LANES)	$ -	$ 262,000	$ -	$ 57,000	**$ 320,000**
SB OFFRAMP (4 LANES)	$ -	$ 311,000	$ -	$ 69,000	**$ 380,000**
NB ONRAMP	$ -	$ 188,000	$ -	$ 41,000	**$ 230,000**
SB ONRAMP	$ -	$ 197,000	$ -	$ 44,000	**$ 250,000**
STH 96 EB RIGHT TURN LANE	$ -	$ 330,000	$ 635,000	$ 73,000	**$ 1,040,000**
STH 96 EB LOOK AHEAD LEFT TURN LANES	$ -	$ 430,000	$ -	$ 95,000	**$ 530,000**
STH 96 EB THRU LANES	$ 60,000	$ 920,000	$ -	$ 202,000	**$ 1,130,000**
STH 96 EB RIGHT TURN LANE INTO ?	$ -	$ 290,000	$ -	$ 64,000	**$ 360,000**
STH 96 WB RIGHT TURN INTO NB ONRAMP	$ -	$ 150,000	$ 35,000	$ 34,000	**$ 220,000**
STH 96 WB LOOK AHEAD LEFT TURN LANES	$ -	$ 430,000	$ -	$ 95,000	**$ 530,000**
STH 96 WB THRU LANES	$ 60,000	$ 920,000	$ -	$ 202,000	**$ 1,130,000**
STH 96 WB LEFT TURN LANES INTO MALL DRIVE	$ -	$ 340,000	$ -	$ 75,000	**$ 420,000**
EXTEND NB ACCELERATION LANE ON USH 41	$ 360,000	$ 595,000	$ -	$ 131,000	**$ 730,000**
TOTAL PROJECT COST					**$ 10,140,000**

* Includes Structure Cost
** Includes Utility Costs
*** Rounded to next highest $10,000

Exhibit 3
Project Location Map

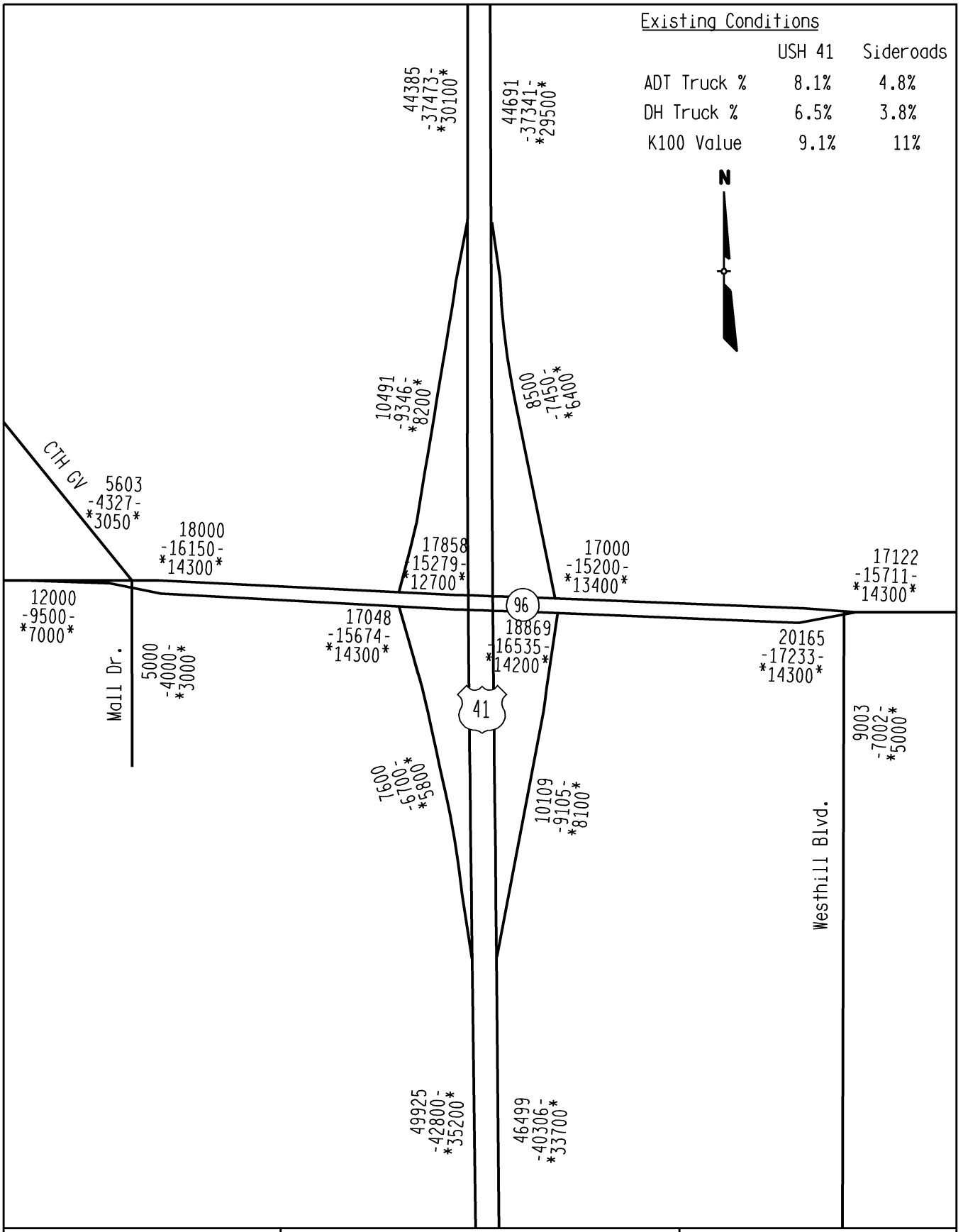
NORTH
NOT TO SCALE

Project Limits



Project Limits

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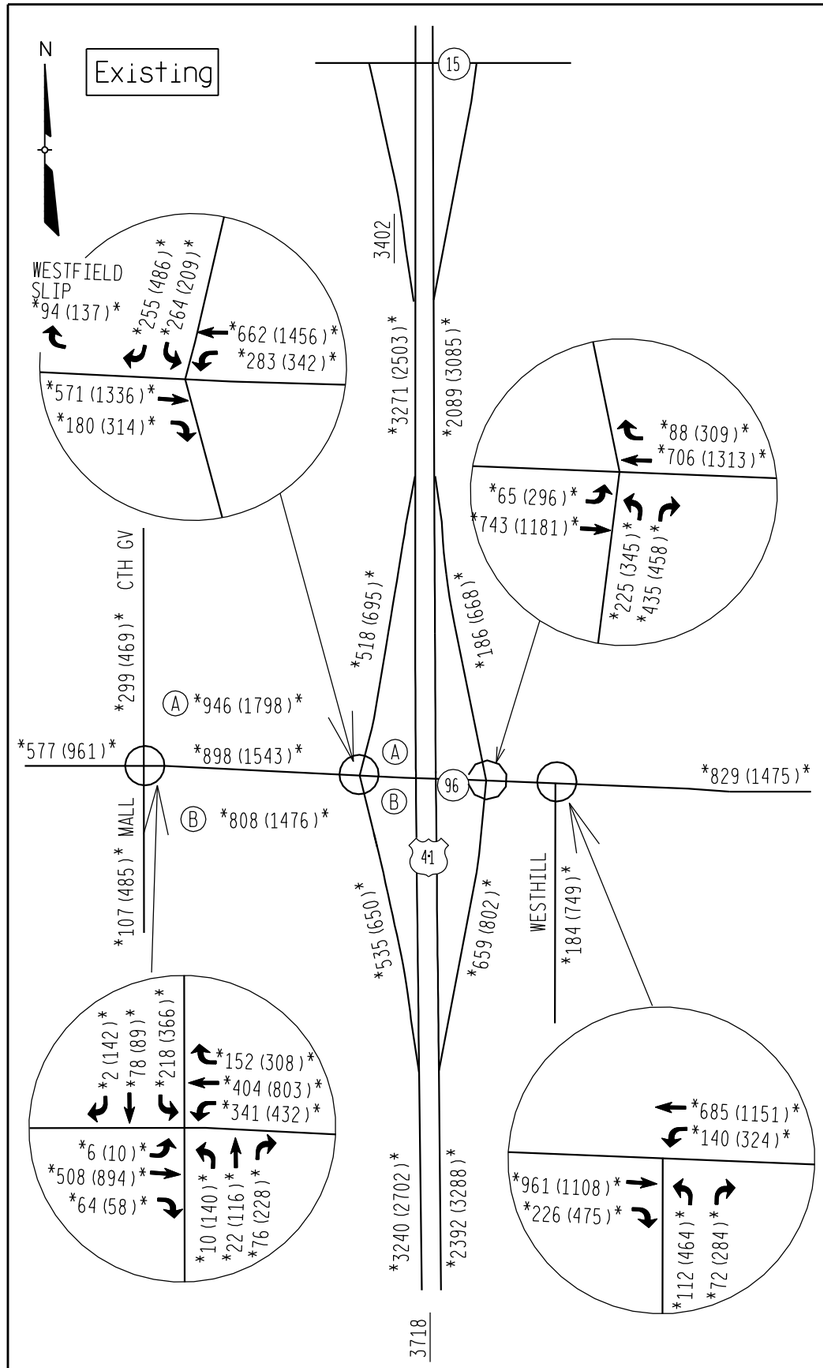
USH 41/STH 96
BACKBONE INTERCHANGE NEEDS
& IMPROVEMENT STUDY

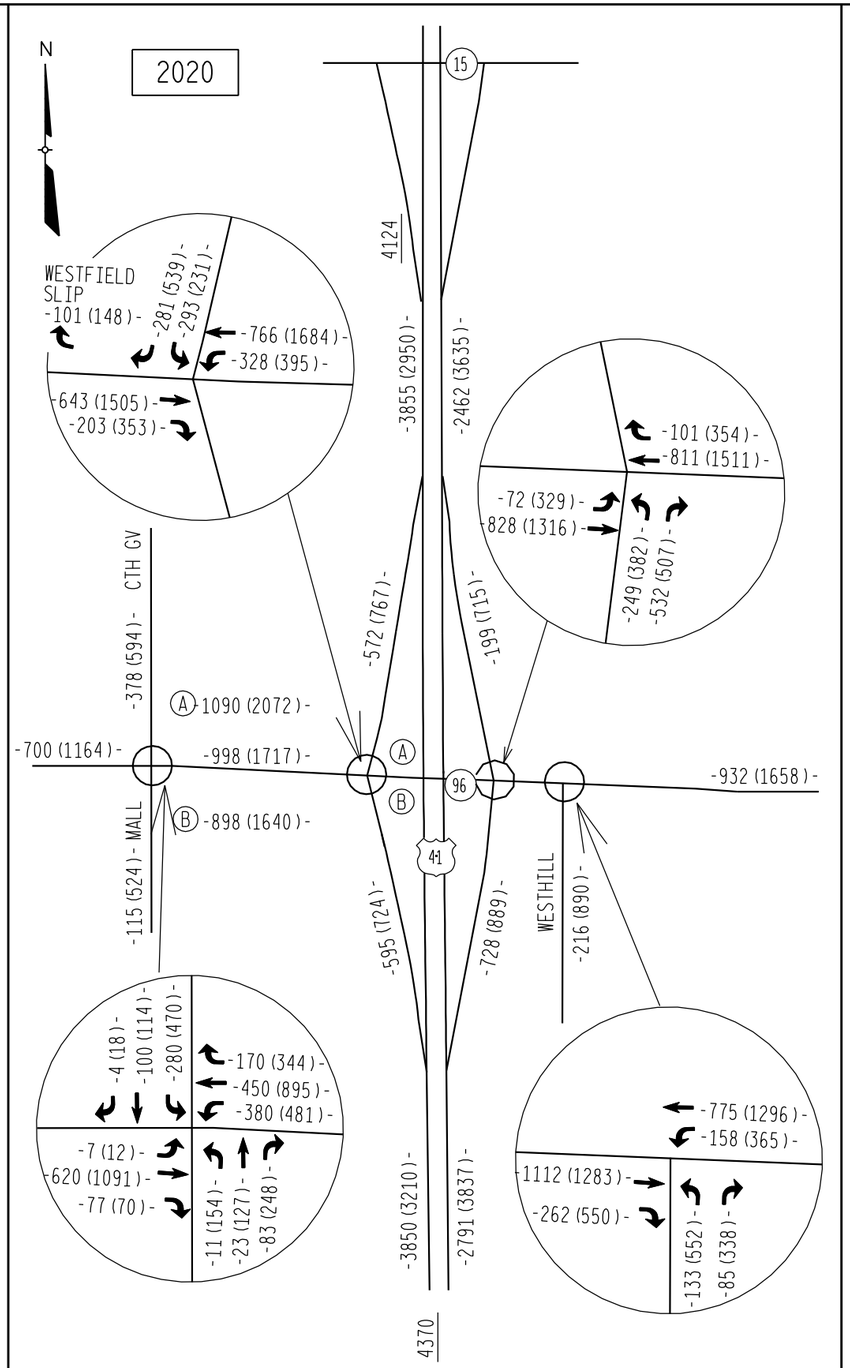
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-XXX- = 2020 ADT
XXX = Existing ADT

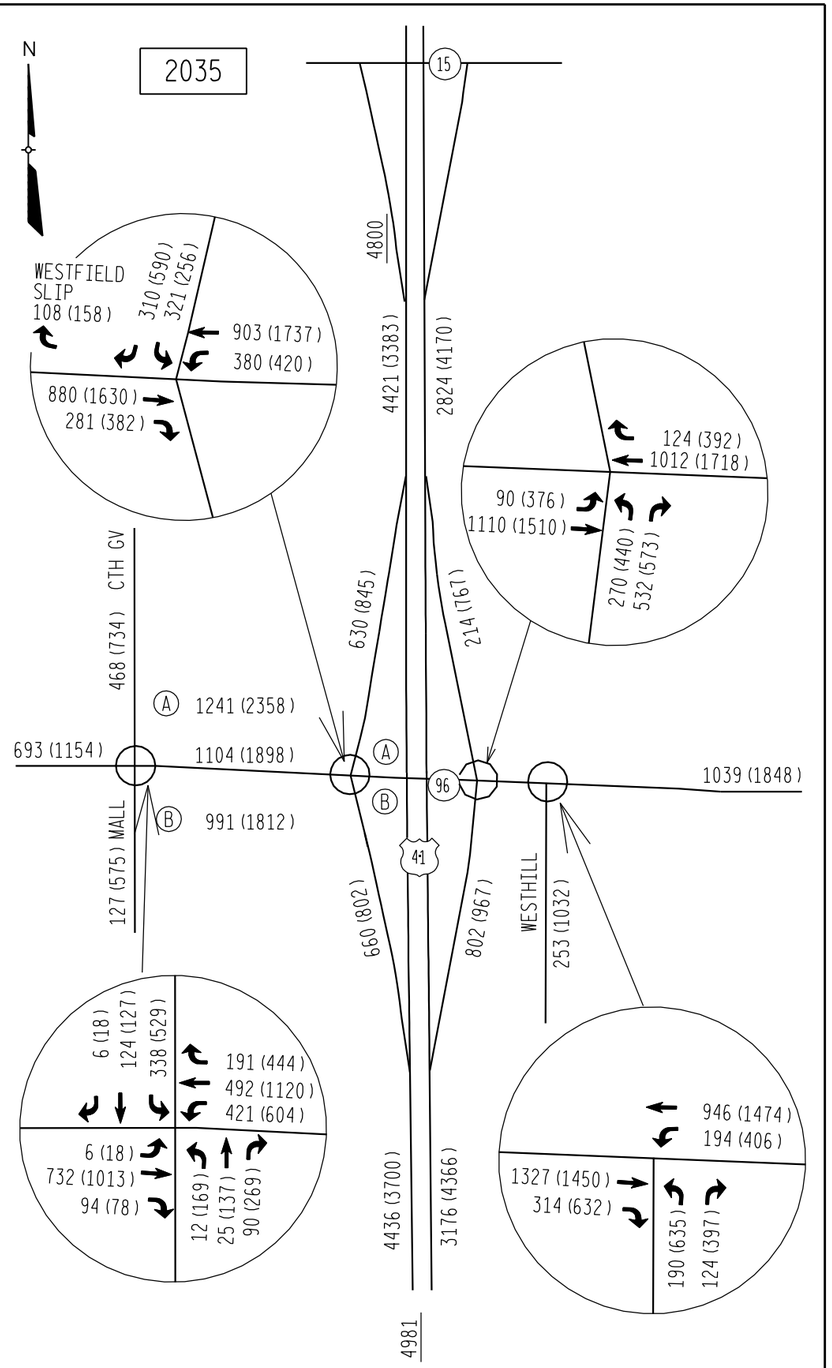
PROJECT NO. 91355 | MARCH 2007

Average Daily Traffic (ADT)

EXHIBIT 4
SHEET 1 OF 1







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PROJECT NO. 91355 | MARCH 2007

USH 41/STH 96
BACKBONE INTERCHANGE NEEDS & IMPROVEMENT STUDY

PEAK HOUR TRAFFIC VOLUMES AND TURNING MOVEMENTS

XX(XX) = 2035 AM Peak (PM Peak) *XX(XX)* = Existing AM Peak (PM Peak)
-XX(XX)- = 2020 AM Peak (PM Peak) XXX = K30 VOLUMES

EXHIBIT 5
SHEET 1 OF 1

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PLOT DATE: 3/16/2007
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SHORT- TERM ALTERNATIVE 1

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 96 (WISCONSIN AVENUE)
OUTAGAMIE COUNTY

LEGEND
- EXISTING RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

N
0' 100' 200'
SCALE

USH 41

STH 96
W WISCONSIN AVE

PROVIDE RIGHT TURN IN &
RIGHT TURN OUT ACCESS ONLY
LEFT TURN EXIT PROHIBITED

INSTALL 100 FT.
LEFT TURN LANE

CONVERT MOUNTABLE
TO RAISED MEDIAN

W WHEELER RD

N WESTHILL BLVD

TRAFFIC SIGNAL
PHASING CHANGE

USH 41 HSL

USH 41 AUXILARY LANES ARE
SHOWN ON EXHIBIT 9
AND ARE INCLUDED IN
THIS ALTERNATIVE

ADVANTAGES

- IMPROVED INTERSECTION SAFETY
- LOW IMPROVEMENT COST

DISADVANTAGES

- DOES NOT PROVIDE ADEQUATE OPERATIONS FOR 2035

WISCONSIN DEPARTMENT OF TRANSPORTATION

EarthTech
A tyco International Ltd. Company

EXHIBIT 6
MARCH 2007

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LONG- TERM ALTERNATIVE 2

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 96 (WISCONSIN AVENUE)
OUTAGAMIE COUNTY

LEGEND
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

N

SCALE 0' 100' 200'

USH 41

SB OFFRAMP, 350 FT.
DUAL LT. & DUAL RT.
TURN LANES

TRAFFIC
SIGNAL
IMPROVEMENTS

NB ONRAMP, 370 FT.
DUAL LANES

EB DUAL LEFT
TURN LANES

LOOK AHEAD
LEFT TURN LANES

RIGHT TURN LANE

WB DUAL LEFT
TURN LANES

LOOK AHEAD
LEFT TURN LANES

RIGHT TURN LANE
0.05 AC. +/-

STH 96

W WISCONSIN AVE

STH 96

W WISCONSIN AVE

MALL DR

0.1 AC. +/-

0.1 AC. +/-

0.1 AC. +/-

RELOCATION
RIGHT TURN LANE

RETAINING
WALLS

SB ONRAMP, 270 FT.
DUAL LANES

NB OFFRAMP, 210 FT.
DUAL LT. & DUAL RT.
TURN LANES

USH 41

USH 41 AUXILARY LANES ARE
SHOWN ON EXHIBIT 9
AND ARE INCLUDED IN
THIS ALTERNATIVE

ADVANTAGES

- IMPROVED LEVEL OF SERVICE (LOS)
- IMPROVED RAMP INTERSECTION SAFETY

DISADVANTAGES

- POTENTIAL ACCESS PROPLEMS FOR NE QUADRANT
- ONE COMMERCIAL DISPLACEMENT

WISCONSIN DEPARTMENT OF TRANSPORTATION

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EXHIBIT 7
MARCH 2007

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LONG - TERM ALTERNATIVE 3

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 96 (WISCONSIN AVENUE)
OUTAGAMIE COUNTY

LEGEND
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

SCALE 0' 100' 200'

W WISCONSIN AVE

IMPROVEMENTS WEST OF USH 41 TO MALL DRIVE SHOWN ON LONG- TERM ALTERNATIVE 2 EXHIBIT AND ARE INCLUDED IN THIS EXHIBIT

EXTEND ACCELERATION LANE

WIDEN BRIDGE TO ACCOMMODATE ACCELERATION LANE

CANADIAN NATIONAL RAILROAD

USH 41 AUXILARY LANES ARE SHOWN ON EXHIBIT 9 AND ARE INCLUDED IN THIS ALTERNATIVE

W WISCONSIN AVE

ADVANTAGES

- IMPROVES NB ON- RAMP MERGE DISTANCE

DISADVANTAGES

- WIDENING OF EXISTING BRIDGE

WISCONSIN DEPARTMENT OF TRANSPORTATION

EarthTech
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EXHIBIT 8
MARCH 2007

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SHORT & LONG - TERM ALTERNATIVES 1, 2 & 3

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 96/STH 125
OUTAGAMIE COUNTY

LEGEND
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

N
SCALE 0' 150' 300'

ADD AUXILIARY LANES

EXTEND BOX CULVERT

1.0 ACRES +/-

RETAINING WALL

USH 41

STH 96

W WHITMAN RD

ADVANTAGES

- DECREASE IN WEAVING
- IMPROVED FREEWAY FLOW
- NO RELOCATIONS

DISADVANTAGES

- DISRUPTION TO USH 41 TRAFFIC
- MOVING GRAND CHUTE SANITARY SEWER
- REAL ESTATE ACQUISITION

WISCONSIN DEPARTMENT OF TRANSPORTATION

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EXHIBIT 9
FEBRUARY 2007

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Backbone Route	Crossroad
USH 41	STH 96
Region	**Location**
North East	City of Appleton
Interchange Type	**Crossroad Function**
Diamond	Rural Principal Arterial
Ramp Terminal	**Bridge Sufficiency**
Signalized	B-44-157 = 96.7
	B-44-158 = 96.7
Bridge Hits	**Bridge Service Life**
0	0



No-Build Conditions

		NB Diverge	NB Merge	SB Diverge	SB Merge	NB Ramps	SB Ramps	FWY North	FWY South	Total	Notes
LOS	2035	C(C)	B(C)	C(C)	C(C)	D(F)	C(F)	-D-	-D-	--	AM Peak (PM Peak) -K30-
	2020	B(C)	B(C)	C(C)	C(B)	C(D)	C(E)	-C-	-C-	--	
	2005	B(C)	B(B)	C(B)	B(B)	B(D)	B(E)	-C-	-C-	--	
Queue	2035	--	--	--	--	342	722	--	--	--	Max Length of Queue Distance from Terminal to Gore: NB = 1250 SB = 1000
	2020	--	--	--	--	318	571	--	--	--	
	2005	--	--	--	--	301	382	--	--	--	
Crashes	(2000-2004)	3	29	1	13	112	96	--	--	254	
	Severity	0	0.34	0	0.15	0.37	0.43	--	--	--	(INJ+FAT) / Total Crash
	Rate	16	131	4	73	1.69	1.63	--	--	--	Merge & Diverge = HMVMT Intersection = MEV

Improved Conditions

		NB Weave	NB Merge	SB Diverge	SB Weave	NB Ramps	SB Ramps	FWY North	FWY South	Total	Notes
LOS	L-T Alt. 3 2035	C(C)	B(C)	C(C)	C(C)	C(C)	B(C)	-D-	-D-	--	AM Peak (PM Peak) -K30-
	L-T Alt. 2 2035	C(C)	B(C)	C(C)	C(C)	C(C)	B(C)	-D-	-D-	--	
	S-T Alt. 1 2020	B(C)	B(C)	C(C)	C(B)	C(C)	B(C)	-C-	-C-	--	
Queue	L-T Alt. 3 2035	--	--	--	--	675	266	--	--	--	Max Length of Queue Distance from Terminal to Gore: NB = 1250 SB = 1000
	L-T Alt. 2 2035	--	--	--	--	675	266	--	--	--	
	S-T Alt. 1 2020	--	--	--	--	373	505	--	--	--	
Crash Benefits	L-T Alt. 3	1	10	0	6	223	163	--	--	403	Crash Benefits calculated by: Reduction in PD Crashes *7,000 + Reduction in INJ Crashes *35,000 + Reduction in FAT Crashes *70,000 (Benefits expressed in thousands per year)
	L-T Alt. 2	1	0	0	6	223	163	--	--	393	
	S-T Alt. 1	1	0	0	6	125	37	--	--	169	

Existing Geometric Deficiencies				
Freeway/Ramps (USH 41)	Acceptable	Poor	Severe	Comments
Ramp Design Speed	☐	☒	☐	NB on ramp crest curve speed rating 63 mph and SB off ramp crest curve speed rating 67 mph, using 2001 GDHS, therefore within acceptable. Vertical curves have deficient speed ratings of 49 mph and 52 mph, respectively using 1990 GDHS criteria.
Ramp Horizontal Alignment	☒	☐	☐	Speed ratings for horizontal curves all within 10 mph of Mainline or greater than 30 mph near side road.
Ramp Merge/Diverge	☐	☒	☐	Tapers deficient for NB and SB on ramps
Stopping Sight Distance	☒	☐	☐	---
Crossroad (STH 96)				
Intersection Sight Distance	☒	☐	☐	Signalized intersection.
Access Control	☐	☐	☒	Gas station entrance is 200' from NB ramp terminal. Service road is 500' from SB ramp terminal. Minimum standard is 1000'
Bridge (Mainline over)				
Bridge Width	☒	☐	☐	Clear width is 57' & req. width is 56'. Bridges have Ratings of 96.7
Vertical Clearance	☒	☐	☐	Vertical clearance is greater than 16' required.
Lateral Clearance	☒	☐	☐	The existing left minimum lateral clearance is 6.0 feet. The existing left minimum lateral clearance is 20.0 feet.

Alternative Construction Costs			
	Total Cost	Structure Costs	ROW Costs
Short Term Alternative 1	**$2,100,000**	$385,000	$200,000
Long Term Alternative 2	**$9,410,000**	$535,000	$745,000
Long Term Alternative 3	**$10,140,000**	$535,000	$745,000

Preferred Alternative Discussion

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 96 (WISCONSIN AVENUE)
OUTAGAMIE COUNTY
DEFICIENCIES

DEFICIENCY: USH 41 TYPICAL SECTION
PAVED SHOULDER OUTSIDE = 8 FT. (REQUIRES 12 FT.)
PAVED SHOULDER INSIDE = 11 FT. (REQUIRES 12 FT.)

DEFICIENCY: CREST VERTICAL CURVE (1990 GDHS)
SPEED RATING = 52 MPH (1990 GDHS)
SPEED RATING = 67 MPH (2001 GDHS)

DEFICIENCY: ACCESS SPACING
SEPARATION BETWEEN RAMP TERMINAL & SERVICE ROAD
DESIRABLE = 1000 FT. EXISTING = 500 FT.

DEFICIENCY: ACCESS SPACING
SEPARATION BETWEEN RAMP TERMINAL & ENTRANCE
DESIRABLE = 1000 FT. EXISTING = 700 FT.

DEFICIENCY: ACCELERATION TAPER
EXISTING LENGTH = 1150 FT (REQUIRES 1200 FT)

DEFICIENCY: ACCELERATION TAPER
EXISTING LENGTH = 800 FT (REQUIRES 1200 FT)

DEFICIENCY: CREST VERTICAL CURVE (1990 GDHS)
SPEED RATING = 49 MPH (1990 GDHS)
SPEED RATING = 63 MPH (2001 GDHS)

DEFICIENCY: ACCESS SPACING
SEPARATION BETWEEN RAMP TERMINAL & ENTRANCE
DESIRABLE = 1000 FT. EXISTING = 400 FT.

DEFICIENCY: ACCESS SPACING
SEPARATION BETWEEN RAMP TERMINAL & ENTRANCE
DESIRABLE = 1000 FT. EXISTING = 200 FT.

DEFICIENCY: USH 41 TYPICAL SECTION
PAVED SHOULDER OUTSIDE = 8 FT. (REQUIRES 12 FT.)
PAVED SHOULDER INSIDE = 11 FT. (REQUIRES 12 FT.)

CTH GV
W WISCONSIN AVE
STH 96
USH 41
WESTHILL

WISCONSIN DEPARTMENT OF TRANSPORTATION
EarthTech
A tyco International Ltd. Company

N

0' 150' 300'
SCALE

EXHIBIT 11
MARCH 2007

...\Deficiency_exhibit_96.dgn 3/15/2007 3:54:11 PM

ENVIRONMENTAL SCREENING ANALYSIS
SHORT-TERM ALTERNATIVE 1

USH 41 and STH 96 Interchange
Outagamie County

Environmental Factor	Potential Impact Level				Comments
	High	Med	Low	NA	
Socio-Economic Factor					
Displacements				X	No displacements required
Natural Environment Factors					
Wetlands				X	No wetland conversion
Streams and Floodplains			X		Extension of box culvert over Mud Creek, project is not in floodplain.
Lakes or Other Open Water				X	None in project area
Threatened and Endangered Species			X		Threatened species exist in project area
Cultural Environmental Factors					
Section 4(f) and 6(f): Parks, Wildlife Refuge Areas				X	None in project area
Historic Resources				X	None in project area
Archaeological Resources			X		Known site exists, assumed to be disturbed, field check.
Hazardous Substances or USTs				X	No known open LUST or ERP cases

ENVIRONMENTAL SCREENING ANALYSIS
LONG-TERM ALTERNATIVE 2

USH 41 and STH 96 Interchange
Outagamie County

Environmental Factor	Potential Impact Level				Comments
	High	Med	Low	NA	
Socio-Economic Factor					
Displacements		X			One business relocation required
Natural Environment Factors					
Wetlands				X	No wetland conversion
Streams and Floodplains			X		Extension of box culvert over Mud Creek, project is not in floodplain.
Lakes or Other Open Water				X	None in project area
Threatened and Endangered Species			X		Threatened species exist in project area
Cultural Environmental Factors					
Section 4(f) and 6(f): Parks, Wildlife Refuge Areas				X	None in project area
Historic Resources				X	None in project area
Archaeological Resources			X		Known site exists, assumed to be disturbed, field check.
Hazardous Substances or USTs				X	No known open LUST or ERP cases

ENVIRONMENTAL SCREENING ANALYSIS
LONG-TERM ALTERNATIVE 3

USH 41 and STH 96 Interchange
Outagamie County

Environmental Factor	Potential Impact Level				Comments
	High	Med	Low	NA	
Socio-Economic Factor					
Displacements		X			One business relocation required
Natural Environment Factors					
Wetlands				X	No wetland conversion
Streams and Floodplains		X			New box culvert and extension of existing box culvert over Mud Creek, project is not in floodplain.
Lakes or Other Open Water				X	None in project area
Threatened and Endangered Species			X		Threatened species exist in project area
Cultural Environmental Factors					
Section 4(f) and 6(f): Parks, Wildlife Refuge Areas				X	None in project area
Historic Resources				X	None in project area
Archaeological Resources			X		Known site exists
Hazardous Substances or USTs				X	No known open LUST or ERP cases

USH 41 and STH 125
Outagamie County
Interchange Study Report



Backbone Interchange Needs and Improvement Study

Prepared for:

Wisconsin Department of Transportation
Northeast Region and
Division of Transportation Investment Management
Bureau of State Highway Programs

Prepared by:

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Madison, Wisconsin 53717
608-836-9800

March 2007

WisDOT Project No. 1111-11-99
Earth Tech Project No. 91355

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1 Alternatives Evaluation Summary
2 Cost Estimate Summaries
3 Project Location Map
4 Average Daily Traffic Volumes - Existing, 2020 and 2035
5 Peak Hour Traffic Volumes and Turning Movements - Existing, 2020 and 2035
6 Short-Term Alternative 1 Layout
7 Long-Term Alternative 2 Layout
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9 Short- and Long-Term Auxiliary Lane Layout
10 Interchange Deficiency and Improvement Summary
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12 Environmental Screening Analysis

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APPENDIX (Appendices are on a CD bound with this report.)

A Interchange Analysis Methodology
B Initial Data
C No-Build Operational Analysis
D Crash Analysis
E Geometric Deficiency Analysis
F Alternative Operational Analysis
G Alternative Impacts Data
H Crash Benefit Data
I Construction Cost Estimates
J Project Meeting Minutes

USH 41 AND STH 125 INTERCHANGE SUMMARY

INTRODUCTION

This report presents the results of a comprehensive evaluation of the USH 41 and STH 125 (West College Avenue) interchange in Outagamie County. A project location map is in Exhibit 3. The scope of the USH 41 and STH 125 interchange project study was to analyze the existing conditions and future needs, and identify improvement alternatives to address the needs.

The USH 41 and STH 125 interchange study is part of the overall Backbone Interchange Needs and Improvement Study (Backbone Study) which will include an evaluation of 25 interchanges on the Non Southeast Corridors 2020 Backbone System. The study was completed for the WisDOT Bureau of State Highway Programs (BSHP) in the Division of Transportation Investment Management and the WisDOT North Central Region. The purpose of the overall study is to assist the WisDOT Backbone Programming Committee in determining future interchange programming needs and prioritizing interchange improvement projects.

DEFICIENCY ANALYSIS

The existing USH 41 and STH 125 interchange was reviewed and analyzed for traffic operational, safety, geometric, and structural deficiencies. The interchange is operating over capacity and has operational problems in the peak hours. The most significant deficiency is that the northbound ramp terminal currently operates at LOS F during the afternoon peak hour. By 2020 the southbound ramp terminal will operate at LOS F in the PM peak and the queues on both ramps will be excessive. The queue on the northbound off-ramp will extend over 200 feet past the gore onto the USH 41 ramp taper by 2020.

There is an average of 23 crashes annually associated with the interchange, but the crash rates are not high. The lower than average crash rates are influenced by the higher volumes at this location. The worst crash location is the northbound ramps, with 14.0 annual average crashes and a crash rate of 0.87. A summary of the existing geometric and operational deficiencies and the crash data is in Exhibit 10.

The interchange has several geometric deficiencies. The most significant are access spacing related. The North Mall Drive and South Nicolet Road intersection to the Fox River Mall is 500 feet from the southbound ramp terminal. The distance between ramp gores from the STH 125 interchange to the STH 96 interchange is 1,500 feet.

ALTERNATIVES

Earth Tech and the WisDOT NE Region jointly explored several possible alternatives and developed one short-term alternative and two long-term alternatives for further evaluation in accordance with the Backbone Study criteria. Earth Tech completed operational and safety analysis and developed cost estimates for these alternatives consistent with the approach used on all other interchanges in the Backbone Study. A summary of the alternatives layouts and evaluation is in Exhibit 1. A cost estimate summary is in Exhibit 2.

Please note that while all alternatives include both northbound and southbound auxiliary lanes on USH 41 between STH 125 and STH 96, the costs for these two lanes were divided between the STH 125 alternatives and the STH 96 interchange alternatives. The costs for the

northbound auxiliary lane were included in the STH 96 alternative costs, and the costs for the southbound auxiliary lane were included in the STH 125 alternative costs.

Short-Term Alternative 1: Improvements - $2,470,000

Short-Term Alternative 1 improves the most significant future long queues on the southbound and northbound off-ramps, and weaving on USH 41 between STH 96 and STH 125. Short-Term Alternative 1 (shown on Exhibit 6) and the auxiliary lanes layout (shown on Exhibit 9) includes:

- Auxiliary lanes on USH 41 southbound and northbound from STH 96 to STH 125.
- Adding a second exiting lane at the southbound off-ramp.
- Provide 340-foot dual left and dual right turn lanes at the southbound ramp terminal.
- Provide 800 feet dual left and dual right turn lanes at northbound ramp terminal.
- Prohibit right turn on red at southbound ramp terminal.
- Create signalized right turn movement at northbound ramp terminal.

Advantages

- Improved turning movement LOS and reduced queues at the ramp terminals compared to the no-build scenario.
- Safety is improved for right turn movements.
- Decrease in weaving and improved freeway flow on USH 41.
- Improvements are compatible with long-term alternatives.

Disadvantages

- Does not fully address safety issue of weaving and queue spillback between the Nicolet Road/Mall Drive intersection and the southbound ramp terminal intersection.
- LOS is not adequate after 2020 and for the 2020 PM peaks.

Long-Term Alternative 2: Improvements - $8,360,000

Long-Term Alternative 2 is developed to improve existing capacity and safety problems on all the ramps, provide increased capacity on STH 125, and address the safety issue of weaving and queue spillback between the Nicolet Road/Mall Drive intersection and the southbound ramp terminal intersection. Long-Term Alternative 2 (shown on Exhibit 7) includes:

- USH 41 Auxiliary Lane and off-ramp improvements from Short-Term Alternative 1.
- Reconstruction of all on-ramps to provide dual lanes.

- Reconstruction of STH 125 through the interchange to have four through lanes plus single right turn lanes and dual look ahead left turn lanes at the ramp terminal intersections.

- Closure of the median and removing the signal at the Nicolet Road/Mall Drive and STH 125 intersection.

Advantages

- Fully addresses the major operational and safety deficiencies through 2035.

- Eliminates the expected queue spillback and difficult weaving on STH 125 between the Nicolet/Mall and southbound ramp terminal intersection.

- Off-ramp queues will be reduced to less than the ramp length and are not projected to extend onto the mainline.

Disadvantages

- Ease of access to businesses North and South of STH 125 greatly reduced.

Long-Term Alternative 3: Improvements - $11,300,000

Long-Term Alternative 3 will significantly improve traffic operations by constructing the same improvements as in Long-Term Alternative 2 with the addition of realigning South Nicolet Road and North Mall Drive approximately 350 feet west from their current locations. Long-Term Alternative 3 (shown in Exhibit 8) includes:

- USH 41 Auxiliary Lane, off-ramp and on-ramp improvements from Short-Term Alterative 1 and Long-Term Alternative 2.

- STH 125 geometric reconstruction improvements from Long-Term Alternative 2.

- Cul de sac existing South Nicolet Road and North Mall Drive to prohibit direct access to and from STH 125.

- Realign South Nicolet Road and North Mall Drive 350 feet west of their existing alignments.

Advantages

- Fully addresses the major operational and safety deficiencies through 2035.

- Reduces the expected queue spillback and difficult weaving on STH 125 between the Nicolet/Mall and southbound ramp terminal intersection.

Disadvantages

- Substantial right of way impacts.

- Potential to relocate two auto dealerships.

USH 41 AND STH 125 INTERCHANGE STUDY
OUTAGAMIE COUNTY

STUDY OVERVIEW

This report presents the results of a comprehensive operational evaluation of the USH 41 and STH 125 interchange located in the Town of Grand Chute, Outagamie County, Wisconsin. The study area for this interchange includes USH 41 from ½ mile south of STH 125 to ½ mile north of STH 125 and STH 125 (West College Avenue) from Casaloma Drive east to North Westhill Boulevard. This interchange study was completed in coordination with the USH 41 and STH 96 interchange study, 1 mile to the north.

USH 41 is a WisDOT Corridors 2020 Backbone route. STH 125 is a rural minor arterial in the Appleton urbanized area. USH 41 is constructed as a freeway and STH 125 is constructed as a four lane divided urban street.

This interchange evaluation is part of the Backbone Interchange Needs and Improvement Study (Backbone Study) initiated by the Wisconsin Department of Transportation (WisDOT) Backbone Programming Committee. The study was completed for the WisDOT Bureau of State Highway Programs (BSHP) in the Division of Transportation Investment Management and the Northeast Region. The purpose of the overall study is to assist the WisDOT Backbone Programming Committee in determining future interchange programming needs and prioritizing interchange improvement projects on the Non-Southeast Corridors 2020 Backbone System.

Each WisDOT Region identified existing interchanges and future interchange locations for evaluation in the overall project. Earth Tech evaluated each of the 25 interchanges using a standard process to provide consistent results across diverse geographic and functional interchanges. For each interchange the evaluation included:

- Inventory and evaluation of the existing interchanges, including mainline highway, cross roads, and bridges
- Operational analysis of existing and forecasted traffic conditions
- Identification of existing operational, geometric, and safety deficiencies
- Development and evaluation of alternatives to address deficiencies and future traffic needs
- Development of detailed cost estimates for each alternative
- Providing evaluation data to WisDOT for use in prioritizing the interchange projects
- Coordinating with the WisDOT Region throughout the study

After completion of the individual interchange evaluations, BSHP will score each interchange and present the information to the Backbone Programming Committee for review, prioritization, and programming of future interchange improvement projects. The study was a planning level study and did not include detailed geometric design, detailed environmental evaluation, or public involvement.

INTERCHANGE ANALYSIS APPROACH

The standard interchange analysis methodology used for all interchanges in the Backbone Study is described in detail in Appendix A. Earth Tech and the WisDOT NE Region jointly explored several possible alternatives and developed one short-term alternative and two long-term alternatives for further evaluation in accordance with the Backbone Study criteria.

Earth Tech performed an independent evaluation of the three alternatives for the USH 41 and STH 125 study that included the following:

- Perform operational analysis on the interchange merge, diverge, and ramp terminal areas for no-build and each alternative. The years analyzed include existing, 2020, and 2035.
- Complete crash analyses for the interchange merge, diverge, and ramp terminal influence areas for years 2000 to 2004.
- Determine geometric deficiencies for the freeway, ramps, and ramp terminal segments using as-built plans provided by WisDOT.
- Provide cost estimates using the Backbone Study cost estimating methodology.
- Develop crash benefits for each alternative and provide an estimated crash reduction assuming existing crash rates.

The Backbone Study included extensive coordination with the WisDOT regions. Project meeting minutes are in Appendix J.

DEFICIENCY ANALYSIS OF EXISTING SYSTEM

A summary of the existing geometric, safety, and operational deficiencies is in Exhibit 10. Exhibit 11 shows specific geometric deficiencies. Data used for the interchange deficiency analysis is in Appendix B.

Traffic Forecasts

The traffic forecast for the Backbone Study was developed by HNTB from the current Appleton Metropolitan Planning Organization (MPO) travel demand model. The turning movement counts used for the traffic forecasts were taken in February and March 2005. These counts are used in the traffic forecast to determine future hourly peak traffic volumes. Based on knowledge of seasonal traffic patterns at these interchanges, Earth Tech and the Northeast Region determined that the existing counts and traffic forecasts are not representative of the interchange traffic volumes throughout the year.

Based on discussions with the Region and ATR data located south of this project, the ramp terminal counts, including existing count volumes and forecast volumes were increased by 20 percent. The K30 traffic volumes were used to analyze USH 41 basic freeway segments.

Average daily traffic volumes for existing year, 2020, and 2035 are shown in Exhibit 4. Peak hour volumes, including turning movements, for existing year, 2020, and 2035 are shown in Exhibit 5.

Operational Analysis

Operational analysis included LOS analysis at all freeway and ramp terminal segments of the USH 41 and STH 125 interchange. We analyzed the existing interchange layout with forecasted traffic volumes for AM and PM peak hours for years 2020 and 2035. The K30 traffic volumes were used to analyze USH 41 basic freeway segments on each side of the interchange. The existing interchange layout currently operates poorly at the northbound off-ramp terminal during the PM peak hour. In 2020, the northbound and southbound off-ramp terminals operate at LOS F during the PM peak hour. LOS results for the freeway segments are in Table 1. LOS results for the ramp terminal intersections are shown in Table 2. Details of the no-build operational analysis are in Appendix C.

Table 1

FREEWAY LEVEL OF SERVICE FOR NO-BUILD CONDITIONS							
Year	**Location**	**NB Diverge**	**NB Merge**	**SB Diverge**	**SB Merge**	**Freeway North of STH 125**	**Freeway South of STH 125**
	Type of HCS Analysis	**Ramp Junction**	**Ramp Junction**	**Ramp Junction**	**Ramp Junction**	**K30**	**K30**
Existing	**AM**	C	B	C	B	C	C
	PM	C	B	B	C		
2020	**AM**	C	B	C	C	C	D
	PM	C	C	C	C		
2035	**AM**	C	B	D	C	D	D
	PM	D	C	C	C		

Table 2

INTERSECTION LEVEL OF SERVICE NO-BUILD CONDITIONS																
Location	Analysis Year	Peak Hour	Overall Intersection	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
NB Ramps Terminal (signals)	Existing	AM	D	A	A	--	--	C	A	D	D	B	--	--	--
		PM	F	A	A	--	--	F	F	F	F	C	--	--	--
	2020	AM	E	A	A	--	--	C	A	D	D	B	--	--	--
		PM	F	A	A	--	--	F	F	F	F	F	--	--	--
	2035	AM	E	A	A	--	--	C	A	D	D	C	--	--	--
		PM	F	B	B	--	--	F	F	F	F	F	--	--	--
SB Ramps Terminal (signals)	Existing	AM	C	--	C	A	A	A	--	--	--	--	D	D	C
		PM	C	--	E	F	A	A	--	--	--	--	D	D	C
	2020	AM	D	--	C	A	A	A	--	--	--	--	E	E	F
		PM	F	--	F	F	F	A	--	--	--	--	D	D	C
	2035	AM	E	--	C	A	A	A	--	--	--	--	F	F	F
		PM	F	--	F	F	F	B	--	--	--	--	D	D	F

Queues from the signalized ramp terminal intersections at the northbound off-ramps extend past the gore during the 2020 scenarios and extend past the gores at both the northbound and southbound off-ramps for the 2035 scenarios. These queues create safety problems because oncoming freeway traffic does not expect to stop quickly. Maximum queue lengths are shown in Table 3.

Table 3

RAMP TERMINAL QUEUE LENGTHS NO-BUILD CONDITIONS				
	Distance from Terminal to Gore	Existing	2020	2035
NB Off-Ramp	1,050 ft	441 ft	1,280 ft	>1,500 ft
SB Off-Ramp	1,000 ft	308 ft	806 ft	1,226 ft

Crash Analysis

We completed a crash analysis for the two merge influence areas, two diverge influence areas, and two ramp terminal intersections from years 2000 to 2004. We calculated crash rates and severity for each year at each interchange influence area. An estimated 116 crashes occurred at the merge and diverge areas, and ramp segments of the USH 41 and STH 125 interchange from 2000 to 2004. Eighty-nine percent of these crashes occurred at the signalized ramp terminals. Average annual crash rates and crash severity are shown in Table 4. A summary of the crash data is in Exhibit 10. Details of the crash analysis are in Appendix D. See Appendix A for descriptions of influence areas.

The four ramp merge and diverge locations at the STH 125 interchange have crash rates that are less than average for this Backbone Study. The crash rates at the ramp terminal intersections at STH 125 are much lower than the crash rates at STH 96. The STH 125 and STH 96 interchanges both serve the Fox River Mall retail area. One possible reason for lesser crash rates at STH 125 is the NE Region previously implemented a very well coordinated TTI signal phasing system at the two ramp terminals.

TABLE 4

CRASH HISTORY USH 41 AND STH 125 INTERCHANGE						
Location	Year	Crash Type			Average Annual Crash Rate	Crash Severity
		PDO	Injury	Fatal		
Northbound Diverge (HMVMT)	2000-2004	3	1	0	13	0.25
Northbound Merge (HMVMT)	2000-2004	2	0	0	10	0.00
Southbound Diverge (HMVMT)	2000-2004	0	1	0	5	1.00
Southbound Merge (HMVMT)	2000-2004	2	4	0	20	0.67
NB Ramps (MVE)	2000-2004	43	27	0	0.87	0.39
SB Ramps (MVE)	2000-2004	23	10	0	0.66	0.30
Totals	2000-2004	73	43	0	---	---

Geometric and Structural Analysis

WisDOT provided the following as-built plans, which were used as the starting point for the geometric and structural analysis (As-built plan sheets are in Appendix B):

- WisDOT ID Number: 1123-05-71 - 1991
- WisDOT ID Number: 1000-03-81 - 1985 and 2002 Revision
- WisDOT ID Number: 1121-03-70 - 1967

The interchange has several geometric deficiencies. The most significant are access spacing related. The North Mall Drive and South Nicolet Road intersection to the Fox River Mall is 500 feet from the southbound ramp terminal. The distance between ramp gores from the STH 125 interchange to the STH 96 interchange is 1,500 feet. The existing geometric deficiencies are summarized in Exhibits 10 and 11. Details of the geometric analysis are in Appendix E.

ALTERNATIVE EVALUATION

The main objective for the three improvement alternatives was to correct the existing and projected operational and safety deficiencies. In all three alternatives, capacity was added for the southbound and northbound off-ramp movements, and the long-term alternatives also add capacity to STH 125. Earth Tech analyzed the alternatives, with the results presented in this report. An overall summary of the alternatives and their evaluation results is in Exhibit 1.

We completed operational analysis for the short-term alternative in forecast year 2020 and long-term alternative in forecast year 2035. Throughout the alternative evaluation, we reviewed right-of-way plans, utility plans, and completed environmental screenings for each alternative. We also estimated crash benefits and construction costs.

Please note that while all alternatives include both northbound and southbound auxiliary lanes on USH 41 between STH 125 and STH 96, the costs for these two lanes were divided between the STH 125 alternatives and the STH 96 interchange alternatives. The costs for the northbound auxiliary lane were included in the STH 96 alternative costs, and the costs for the southbound auxiliary lane were included in the STH 125 alternative costs.

Short-Term Alternative 1

Short-Term Alternative 1 includes improvements to the off-ramp terminals for both northbound and southbound traffic and the addition of auxiliary lanes on USH 41 between STH 125 and STH 96. The northbound off-ramp consists of 800-foot dual left and right turn lanes, and the southbound off-ramp terminal consists of 340-foot dual left and dual right turn lanes. There will be two exiting lanes for USH 41 southbound. The existing northbound free-flow right turn movement is converted to a signalized interior movement. The right turn at the southbound terminal would be controlled with prohibition of turning on red. The existing interior median noses on STH 125 at the ramp terminals will be moved away from the intersection a minimum of 35 feet to accommodate truck left turn movements.

Short-Term Alternative 1 is shown in Exhibits 6 and 9.

Operational Analysis

The additional capacity at the ramp terminals greatly decreases average delay and improves LOS for off-ramp movements. In 2020 the LOS for the northbound and southbound ramp terminals will improve to LOS C and LOS B, respectively, for the AM peak hour; however, the PM peak hour will still operate at LOS F. The off-ramp queues in 2020 will be a maximum of just over half the length of the ramps.

LOS results for the freeway segments are in Table 5. LOS results for the ramp terminals are shown in Table 6. Queue results for the ramp terminal intersections are shown in Table 7. Operational analysis details are in Appendix F.

Table 5

FREEWAY LEVEL OF SERVICE SHORT-TERM ALTERNATIVE 1					
Year	Location	NB Diverge	NB Weave	SB Weave	SB Merge
	Type of HCS Analysis	Ramp Junction	Ramp Junction	Ramp Junction	Ramp Junction
2020	AM	C	C	C	C
	PM	C	C	C	C

Table 6

INTERSECTION LEVEL OF SERVICE SHORT-TERM ALTERNATIVE 1															
Location	Analysis Year	Peak Hour	Overall	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
NB Ramps (signals)	2020	AM	C	A	A	--	--	C	B	C	C	C	--	--	--
		PM	F	F	B	--	--	F	D	D	D	D	--	--	--
SB Ramps (signals)	2020	AM	B	--	C	C	B	A	--	--	--	--	C	C	D
		PM	F	--	F	F	B	A	--	--	--	--	C	C	D

Note: Right turn movements are expected to have acceptable LOS in the field.

Table 7

QUEUE RESULTS SHORT-TERM ALTERNATIVE 1		
	Distance from Terminal to Gore	2020
NB Off-Ramp	1,050 ft	440 ft
SB Off-Ramp	1,000 ft	672 ft

Impacts

Alternative impacts data is in Appendix G.

Right of Way

We did not identify any right of way impacts with Short-Term Alternative 1.

Utilities

We did not identify any utility impacts with Short-Term Alternative 1.

Environmental

Potential low impacts include the extension of box culverts over Mud Creek, which is not in the floodplain; threatened species exist in the project area; and there is a known archaeological site assumed to be previously disturbed. The environmental screening analysis summary is in Exhibit 12.

Safety Benefits

Short-Term Alternative 1 adds needed capacity to the northbound and southbound off-ramps and controls right turn lanes at the terminal intersections. The auxiliary lanes on USH 41 are expected to reduce the effects of the weaves between STH 125 and STH 96. We estimated crash reduction benefits at each freeway segment and for the overall alternative. We estimated a 2,000 annual crash benefit from the addition of the southbound auxiliary lane, a 91,000 annual

crash benefit from the addition of a right turn lane with a controlled radius at the northbound ramp terminal, and 44,000 for a new right turn lane with a controlled radius and prohibiting right turns on red at the southbound ramp terminal. A summary of the crash reduction benefits is shown in Table 8. Details of the crash reduction benefits are in Appendix H.

Table 8

CRASH REDUCTION BENEFITS SHORT-TERM ALTERNATIVE 1							
	NB Diverge	NB Weave	SB Weave	SB Merge	NB Ramps	SB Ramps	Total
Short-Term Alternative 1	0	1	1	0	91	44	137

Note: Benefits expressed in thousands per year.

Construction Costs

The cost estimate for Short-Term Alternative 1 includes design and construction costs. The estimated cost for Short-Term Alternative 1 is $2,470,000. The cost estimate summary is in Exhibit 2 and the details of the cost estimate are in Appendix I.

Long-Term Alternative 2

Long-Term Alternative 2 provides substantial additional capacity and safety by adding lanes to both STH 125 and all four ramps, by closing the median and remaining left turns at the Nicolet Road/Mall Drive intersection, and by adding auxiliary lanes on USH 41 between STH 125 and STH 96. Reconstruction of STH 125 through the interchange will include four through lanes plus single right turn lanes and dual look ahead left turn lanes at the ramp terminal intersections. On each of the on-ramps, two lanes are provided to accommodate the dual left and single right turn lanes onto the on-ramp. Auxiliary right turn lanes are provided in both eastbound and westbound directions between Nicolet Drive/Mall Road and the southbound off-ramp terminal. No work on the bridges is proposed. Long-Term Alternative 2 is shown on Exhibits 7 and 9.

Operational Analysis

STH 125 and the ramp terminals have improved LOS in Long-Term Alternative 2. The northbound and southbound ramp terminals improve from LOS F in the no-build scenario to LOS D and C, respectively, in the PM peak, and from LOS E to LOS C in the AM peak. Several turning movements will operate at LOS E. All freeway segments will operate at LOS D or better during the peak periods of the 2035 analysis.

LOS results for the freeway segments are in Table 9. LOS results for the ramp terminals are shown in Table 10. Queue results for the ramp terminal intersections are shown in Table 11. Operational analysis details are in Appendix F.

Table 9

FREEWAY LEVEL OF SERVICE LONG-TERM ALTERNATIVE 2					
Year	Location	NB Diverge	NB Weave	SB Weave	SB Merge
	Type of HCS Analysis	Ramp Junction	Ramp Junction	Ramp Junction	Ramp Junction
2035	AM	C	C	C	C
	PM	D	C	C	C

Table 10

INTERSECTION LEVEL OF SERVICE LONG-TERM ALTERNATIVE 2															
Location	Analysis Year	Peak Hour	Overall	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
NB Ramps (signals)	2035	AM	C	C	A	--	--	C	D	D	D	D	--	--	--
		PM	D	D	C	--	--	D	E	E	E	E	--	--	--
SB Ramps (signals)	2035	AM	C	--	C	C	E	A	--	--	--	--	D	D	D
		PM	C	--	C	D	E	A	--	--	--	--	E	E	D

Note: Right turn movements are expected to have acceptable LOS in the field.

Table 11

QUEUE RESULTS LONG-TERM ALTERNATIVE 2		
	Distance from Terminal to Gore	2035
NB Off-Ramp	1,050 ft.	339 ft.
SB Off-Ramp	1,000 ft.	594 ft.

Impacts

Alternative impacts data is in Appendix G.

Right of Way

Long-Term Alternative 2 requires 1.0 acre of right of way in areas currently under commercial and industrial usage. Based on local real estate information, we estimate the right-of-way acquisition will cost approximately $225,000 per acre. No relocations are necessary so the total right-of-way cost is estimated to be $225,000.

Utilities

There were no potential compensable utilities identified within the northeast and southeast quadrants of the interchange where right-of-way impacts occur. Based on not having complete utility as-builts and the reluctance of utilities to provide information, $50,000 of potential utility impacts were included.

Environmental

Potential low environmental impacts include the extension of box culverts over Mud Creek, which is not in the floodplain; threatened species exist in the project area; and there is a known archaeological site assumed to be previously disturbed. The environmental screening analysis summary is in Exhibit 12.

Safety Benefits

Long-Term Alternative 2 adds needed capacity to the northbound and southbound off-ramps and controls right turn lanes at the terminal intersections. The auxiliary lanes on USH 41 are expected to reduce the effects of the weaves between STH 125 and STH 96. Closing the median and removing the signals at the South Nicolet Road and North Mall Drive intersection eliminates the expected queue backups and difficult weaving between that intersection and the southbound ramp terminal. We estimated a 2,000 annual crash benefit from the addition of the southbound auxiliary lane, a 91,000 annual crash benefit from the addition of a right turn lane with a controlled radius at the northbound ramp terminal, and 44,000 for new right turn lane with a controlled radius and prohibiting right turns on red at the southbound ramp terminal. Side road spacing improvements add 8,000 in annual benefits. A summary of the crash reduction benefits for Long-Term Alternative 2 is shown in Table 12. Details of the crash reduction benefits are in Appendix H.

Table 12

CRASH REDUCTION BENEFITS
LONG-TERM ALTERNATIVE 2

	NB Diverge	NB Weave	SB Weave	SB Merge	NB Ramps	SB Ramps	Total
Long-Term Alternative 2	0	1	0	1	91	52	145

Note: Benefits expressed in thousands per year.

Construction Costs

The cost estimate for Long-Term Alternative 2 includes design, construction, right-of-way, and utility costs. The estimated cost for Long-Term Alternative 2 is $8,360,000. The cost estimate summary is in Exhibit 2 and the details of the cost estimate are in Appendix I.

Long-Term Alternative 3

This alternative is considered to be an ultimate long-term solution. Alternative 3 includes the improvements from Alternatives 1 and 2. In addition, South Nicolet Road and North Mall Drive will be relocated west approximately 350 feet. Relocation of the streets includes construction of cul-de-sacs on both existing roads. Realigned Nicolet Road intersects at West Lawrence Street and proceeds north between two large commercial buildings to STH 125. The realignment of North Mall Drive will proceed from the intersection of realigned Nicolet Road and its intersection of STH 125 creating a signalized intersection. Mall Drive winds northerly through two car dealership parking lots, creating a new signalized intersection with existing Mall Drive and North Metro Drive. No work on the bridges is proposed. Long-Term Alternative 3 is shown on Exhibits 8 and 9.

Operational Analysis

Since Long-Term Alternative 3 improvements within the ramp terminals are identical to Long-Term Alternative 2, all LOS results are the same. LOS results for the freeway segments are in Table 13. LOS results for the signalized ramp terminals are shown in Table 14. Queue results for the ramp terminal intersections are shown in Table 15. Operational analysis details are in Appendix F.

Table 13

FREEWAY LEVEL OF SERVICE LONG-TERM ALTERNATIVE 3					
Year	Location	NB Diverge	NB Weave	SB Weave	SB Merge
	Type of HCS Analysis	Ramp Junction	Ramp Junction	Ramp Junction	Ramp Junction
2035	AM	C	C	C	C
	PM	D	C	C	C

Table 14

INTERSECTION LEVEL OF SERVICE LONG-TERM ALTERNATIVE 3															
Location	Analysis Year	Peak Hour	Overall	From West			From East			From South			From North		
				L	T	R	L	T	R	L	T	R	L	T	R
NB Ramps (signals)	2035	AM	C	C	A	--	--	C	D	D	D	D	--	--	--
		PM	D	D	C	--	--	D	E	E	E	E	--	--	--
SB Ramps (signals)	2035	AM	C	--	C	C	E	A	--	--	--	--	D	D	D
		PM	C	--	C	D	E	A	--	--	--	--	E	E	D

Note: Right turn movements are expected to have acceptable LOS in the field.

Table 15

QUEUE RESULTS LONG-TERM ALTERNATIVE 3		
	Distance from Terminal to Gore	2035
NB Off-Ramp	1,050 ft.	339 ft.
SB Off-Ramp	1,000 ft.	594 ft.

Impacts

Alternative impacts data is in Appendix G.

Right of Way

Long-Term Alternative 3 requires an additional 2.0 acres of right of way in areas currently under commercial and industrial usage in addition to the 1.0 acres identified in Long-Term Alternative 2. Based on local real estate information, we estimate the additional right-of-way acquisition for Long-Term Alternative 3 will cost approximately $667,000 per acre, with an estimated total right-of-way cost of $1,541,000 for the alternative, which includes the $225,000 from the previous alternative.

Utilities

In addition to the $50,000 of utility costs assumed in Long-Term Alternative 2, $50,000 of assumed costs were included to move the AT&T 600 pair copper cable located along the new Mall Drive layout, for a total alternative cost of $100,000.

Environmental

Potential low environmental impacts include the extension of box culverts over Mud Creek, which is not in the floodplain; threatened species exist in the project area; and there is a known archaeological site assumed to be previously disturbed. Two auto dealerships may need to be relocated to accommodate the realigned Mall Drive. Restrictive franchise requirements will require significant effort in relocating the dealership. The environmental screening analysis summary is in Exhibit 12.

Safety Benefits

Long-Term Alternative 3 provides the same crash reduction benefit as Long-Term Alternative 2. A summary of the crash reduction benefits for Long-Term Alternative 3 is shown in Table 16. Details of the crash reduction benefits are in Appendix H.

Table 16

CRASH REDUCTION BENEFITS LONG-TERM ALTERNATIVE 3							
	NB Diverge	NB Weave	SB Weave	SB Merge	NB Ramps	SB Ramps	Total
Long-Term Alternative 2	0	1	0	1	91	52	145

Note: Benefits expressed in thousands per year.

Construction Costs

The cost estimate for Long-Term Alternative 3 includes design, construction, and right-of-way costs. The estimated cost for Long-Term Alternative 3 is $11,300,000. The cost estimate summary is in Exhibit 2 and the details of the cost estimate are in Appendix I.

Exhibits

WisDOT Backbone Needs and Improvement Study

EarthTech
A Tyco International Ltd. Company

EXHIBIT 1 - INTERCHANGE EVALUATION SUMMARY

USH 41 and STH 125 INTERCHANGE

Outagamie County

EXHIBIT 1
WisDOT ID 1111-11-99
March 2007

ALTERNATIVES CHARACTERISTICS	NO-BUILD ALTERNATIVE	SHORT-TERM ALTERNATIVE 1	LONG-TERM ALTERNATIVE 2	LONG-TERM ALTERNATIVE 3
DESCRIPTION	> Existing interchange configuration	> Auxiliary lanes on USH 41 between STH 96 and STH 125 > Adding a 2nd exiting lane at the southbound off-ramp > Provide 340-foot dual left and dual right turn lanes at the southbound ramp terminal > Provide 800 feet dual left and dual right turn lanes at northbound ramp terminal > Prohibit right turn on red at southbound ramp terminal > Create signalized right turn lane at northbound ramp terminal	> USH 41 Auxiliary Lanes and off-ramp improvements from Short Term Alternative 1 > Reconstruction of both on-ramps to provide dual lanes > Reconstruction of STH 125 through the interchange to have four through lanes plus single right turn lanes and dual look ahead left turn lanes at the ramp terminal intersections > Closure of the median and removing the signal at the Mall Drive intersection	> Includes Alt 1 and Alt 2 improvements > Cul-de-sac existing South Nicolet Road and North Mall Drive to prohibit direct access to and from STH 125 > Realign South Nicolet Road and North Mall Drive 350 feet west of their existing alignments with a new signalized intersection on STH 125
TOTAL COSTS		> $2.47 million	> $8.36 million	> $11.30 million
TRAFFIC OPERATIONS	> SB ramp terminal at LOS B today and LOS F in 2035 > NB ramp terminal at LOS E today and LOS F in 2020 > NB off-ramp queues extend past the gore in 2020 > All 4 freeway ramp junctions are LOS D or better through 2035 > SB off-ramp queues extend past the gore in 2035	> Improves ramp operational deficiencies through 2020 > SB ramp terminal LOS C in 2020 > NB ramp terminal LOS D in 2020 > NB off-ramp queue reduced to 440 ft. in 2020 > SB off-ramp queue reduced to 672 ft. in 2020	> Significantly improves all existing and projected operational deficiencies through 2035 > SB ramp terminal LOS C in 2035 > NB ramp terminal LOS D in 2035 > NB off-ramp queue reduced to 339 ft. in 2035 > SB off-ramp queue reduced to 594 ft. in 2035	> Significantly improves all existing and projected operational deficiencies through 2035 > SB ramp terminal LOS C in 2035 > NB ramp terminal LOS D in 2035 > NB off-ramp queue reduced to 339 ft. in 2035 > SB off-ramp queue reduced to 594 ft. in 2035
CRASHES and SAFETY	> Average 23 crashes annually > Highest crash location is NB ramp terminal with 14 annual crashes > Crash rates and severity do not exceed action thresholds	> Annual crash benefit - 137,000 > Increased capacity and controlled right turns at ramp terminals should reduce crashes	> Annual crash benefit - 145,000 > Increased capacity and controlled right turns at ramp terminals should reduce crashes > Ramp queues further reduced from Alt 1 > Fully resolves weaving and queue spillback between Mall Drive and SB off-ramp	> Annual crash benefit - 145,000 > Increased capacity at ramp terminals should reduce crashes > Ramp queues further reduced from Alt 1 > Ramp queues further reduced from Alt 1 > Fully resolves weaving and queue spillback between Mall Drive and SB off-ramp
GEOMETRIC and ACCESS SPACING	> NB on-ramp has acceleration taper deficiency > NB off-ramp and SB on-ramp have horizontal and vertical curve deficiencies > Signalized Mall Drive is 500 ft. horizontal and vertical	> Ramp geometric deficiencies improved > No right turn on red at SB terminal reduces weaving to turn left at South Nicolet Road	> Ramp geometric deficiencies improved > Deficient side road spacing to Mall Drive resolved	> Ramp geometric deficiencies improved > Deficient side road spacing to Mall Drive resolved
BRIDGES	> Sufficiency rating = 95.9 NB and 95.9 SB	> No changes	> No changes	> No changes
RIGHT OF WAY and UTILITIES IMPACTS		> No R/W or utility impacts	> Minor R/W impacts > 1.0 acres R/W > Potential minor utility impacts > Total cost $275,000	> Significant R/W impacts > 3.0 acres R/W > Potential minor utility impacts > Potential for two auto dealership relocations > Total cost $1.64 million
ENVIRONMENTAL IMPACTS		> Potential low impact to Mud Creek for box culvert extensions > Threatened species exist in project area > Known arch site exists, assumed previously disturbed	> Potential low impact to Mud Creek for box culvert extensions > Threatened species exist in project area > Known arch site exists, assumed previously disturbed	> Potential low impact to Mud Creek for box culvert extensions > Threatened species exist in project area > Known arch site exists, assumed previously disturbed > Potential for auto dealership displacements
ADVANTAGES		> Significantly improves the worst LOS and reduces queues at the ramp terminals > Significant crash benefits > Decrease in weaving and improved freeway flow on USH 41 > All ramp improvements are compatible with both long-term alternatives	> Provides desired LOS through 2035 > Significant crash benefit > Fully resolves Mall Drive access spacing deficiency > Off-ramp queues will be reduced to less than the ramp length and are not projected to extend onto the mainline	> Provides desired LOS through 2035 > Significant crash benefit > Fully resolves Mall Drive access spacing deficiency > Off-ramp queues will be reduced to less than the ramp length and are not projected to extend onto the mainline > Maintains business access along STH 125
DISADVANTAGES	> Traffic operations at ramp terminals will decrease to LOS F > Off-ramp queues will increase beyond ramp length > Crashes will increase	> Does not fully address safety issues of weaving and queue spillback between Mall Drive and SB off-ramp > LOS is not adequate after 2020	> Ease of access to businesses North and South of STH 125 greatly reduced	> Substantial right of way impacts > Potential to relocate two auto dealerships
CONCLUSIONS and RECOMMENDATIONS	> Not recommended	> Provides significant benefit for low cost	> Addresses all deficiencies and provides good mobility through 2035, but major business access impacts	> Addresses all deficiencies and provides good mobility through 2035, without business access impacts

US 41/STH 125 Interchange
Cost Estimate Summary
Backbone Interchanges Needs and Improvements Study

SHORT TERM ALTERNATIVE 1 PROJECT SEGMENT	STRUCT. COST	CONST. COST *	R/W COST **	ENGR. COST	TOTAL COST ***
SB USH 41 AUXILIARY LANE	$ 50,000	$ 697,000	$ -	$ 154,000	**$ 860,000**
NB OFF RAMP	$ -	$ 678,000	$ -	$ 149,000	**$ 830,000**
SB OFF RAMPS (4 LANES)	$ -	$ 325,000	$ -	$ 72,000	**$ 400,000**
SB OFF RAMPS (2 LANES)	$ 30,000	$ 311,000	$ -	$ 69,000	**$ 380,000**
TOTAL PROJECT COST					**$ 2,470,000**

LONG TERM ALTERNATIVE 2 PROJECT SEGMENT	STRUCT. COST	CONST. COST *	R/W COST **	ENGR. COST	TOTAL COST ***
SB USH 41 AUXILIARY LANE	$ 50,000	$ 697,000	$ -	$ 154,000	**$ 860,000**
NB OFF RAMP	$ -	$ 678,000	$ -	$ 149,000	**$ 830,000**
SB OFF RAMPS (4 LANES)	$ -	$ 325,000	$ -	$ 72,000	**$ 400,000**
SB OFF RAMPS (2 LANES)	$ 30,000	$ 311,000	$ -	$ 69,000	**$ 380,000**
NB ONRAMP	$ 30,000	$ 319,000	$ -	$ 70,000	**$ 390,000**
SB ONRAMP	$ -	$ 268,000	$ -	$ 59,000	**$ 330,000**
NICOLET SB LANES	$ -	$ 104,000	$ -	$ 23,000	**$ 130,000**
NICOLET NB RIGHT TURN LANE	$ -	$ 74,000	$ -	$ 16,000	**$ 90,000**
N. MALL DR. SB RIGHT TURN LANE	$ -	$ 64,000	$ -	$ 14,000	**$ 80,000**
N. MALL DR. NB LANES	$ -	$ 87,000	$ -	$ 19,000	**$ 110,000**
STH 125 EB RIGHT TURN LANE	$ -	$ 200,000	$ -	$ 44,000	**$ 250,000**
STH 125 EB THRU LANES	$ 90,000	$ 920,000	$ 56,000	$ 202,000	**$ 1,180,000**
STH 125 EB LOOK AHEAD LEFT TURN LANES	$ -	$ 560,000	$ -	$ 123,000	**$ 690,000**
STH 125 EB LEFT TURN LANES INTO WESTHILL	$ -	$ 150,000	$ -	$ 34,000	**$ 190,000**
STH 125 WB RIGHT TURN LANE - EAST OF NB ONRAMPS	$ 30,000	$ 320,000	$ 219,000	$ 70,000	**$ 610,000**
STH 125 WB THRU LANES	$ 60,000	$ 830,000	$ -	$ 183,000	**$ 1,020,000**
STH 125 WB LOOK AHEAD LEFT TURN LANES	$ -	$ 420,000	$ -	$ 92,000	**$ 520,000**
STH 125 WB RIGHT TURN LANE - WEST OF SB OFFRAMPS TO 400' WEST OF MALL I	$ -	$ 240,000	$ -	$ 53,000	**$ 300,000**
TOTAL PROJECT COST					**$ 8,360,000**

LONG TERM ALTERNATIVE 3 PROJECT SEGMENT	STRUCT. COST	CONST. COST *	R/W COST **	ENGR. COST	TOTAL COST ***
SB USH 41 AUXILIARY LANE	$ 50,000	$ 697,000	$ -	$ 154,000	**$ 860,000**
NB OFF RAMP	$ -	$ 678,000	$ -	$ 149,000	**$ 830,000**
SB OFF RAMPS (4 LANES)	$ -	$ 325,000	$ -	$ 72,000	**$ 400,000**
SB OFF RAMPS (2 LANES)	$ 30,000	$ 311,000	$ -	$ 69,000	**$ 380,000**
NB ONRAMP	$ 30,000	$ 319,000	$ -	$ 70,000	**$ 390,000**
SB ONRAMP	$ -	$ 268,000	$ -	$ 59,000	**$ 330,000**
NICOLET CUL-DE-SAC	$ -	$ 50,000	$ -	$ 12,000	**$ 70,000**
W. LAWRENCE & NEW NICOLET INTERSECTION	$ -	$ 187,000	$ -	$ 41,000	**$ 230,000**
REALIGNED NICOLET	$ -	$ 400,000	$ 707,000	$ 88,000	**$ 1,200,000**
MALL DRIVE CUL-DE-SAC	$ -	$ 42,000	$ -	$ 9,000	**$ 60,000**
REALIGNED MALL DRIVE	$ -	$ 238,000	$ 644,000	$ 53,000	**$ 940,000**
MALL DRIVE/NICOLET ROAD/N. METRO DRIVE INTERSECTION	$ -	$ 246,000	$ 15,000	$ 54,000	**$ 320,000**
STH 125 EB RIGHT TURN LANE	$ -	$ 280,000	$ -	$ 62,000	**$ 350,000**
STH 125 EB THRU LANES	$ 90,000	$ 1,010,000	$ 56,000	$ 223,000	**$ 1,290,000**
STH 125 EB LOOK AHEAD LEFT TURN LANES	$ -	$ 670,000	$ -	$ 148,000	**$ 820,000**
STH 125 EB LEFT TURN LANES INTO WESTHILL	$ -	$ 150,000	$ -	$ 34,000	**$ 190,000**
STH 125 WB RIGHT TURN LANE - EAST OF NB ONRAMPS	$ 30,000	$ 320,000	$ 219,000	$ 70,000	**$ 610,000**
STH 125 WB THRU LANES	$ 60,000	$ 910,000	$ -	$ 201,000	**$ 1,120,000**
WB STH 125 LEFT TURN LANE INTO NEW NICOLET	$ -	$ 70,000	$ -	$ 16,000	**$ 90,000**
STH 125 WB LOOK AHEAD LEFT TURN LANES	$ -	$ 420,000	$ -	$ 92,000	**$ 520,000**
STH 125 WB RIGHT TURN LANE - WEST OF SB OFFRAMPS TO NEW MALL DR.	$ -	$ 240,000	$ -	$ 53,000	**$ 300,000**
TOTAL PROJECT COST					**$ 11,300,000**

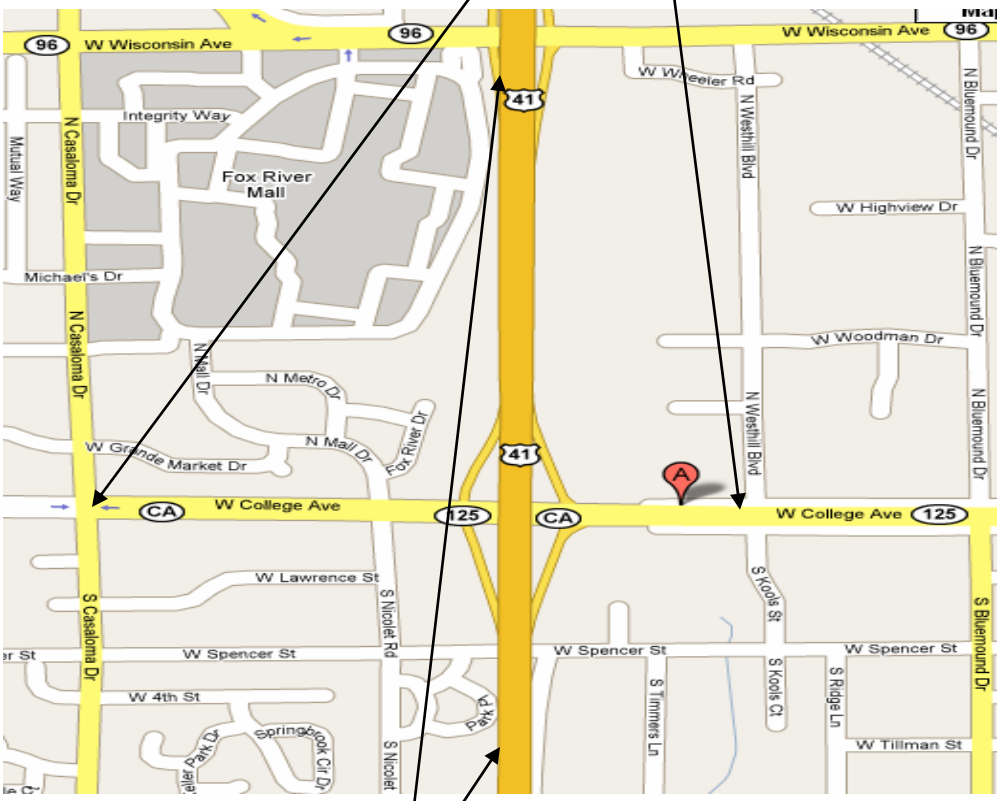
* Includes Structure Cost
** Includes Utility Cost
*** Rounded to next highest $10,000

Exhibit 3
Project Location Map

Project Limits

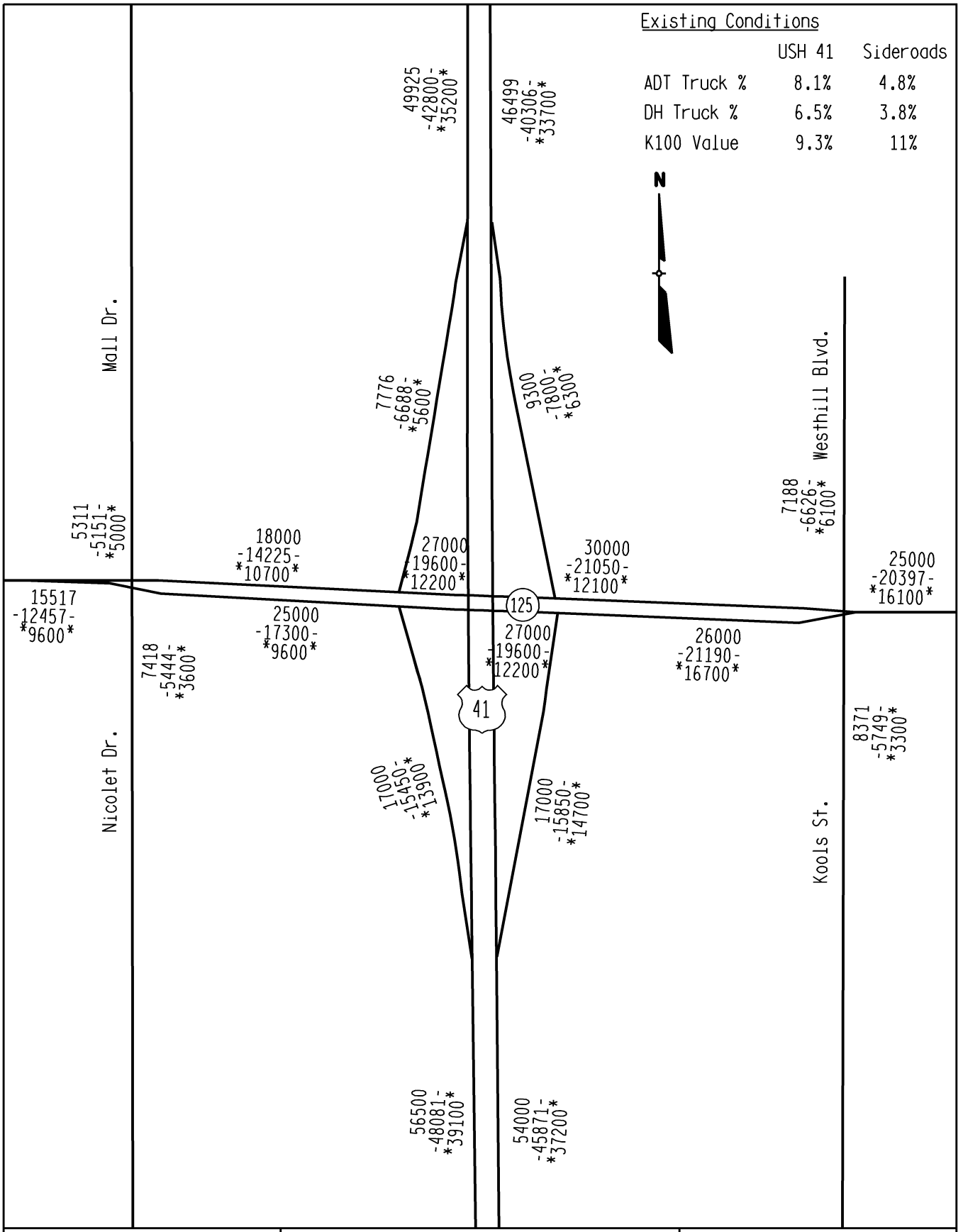
NORTH

NOT TO SCALE



Project Limits

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A Tyco International Ltd. Company

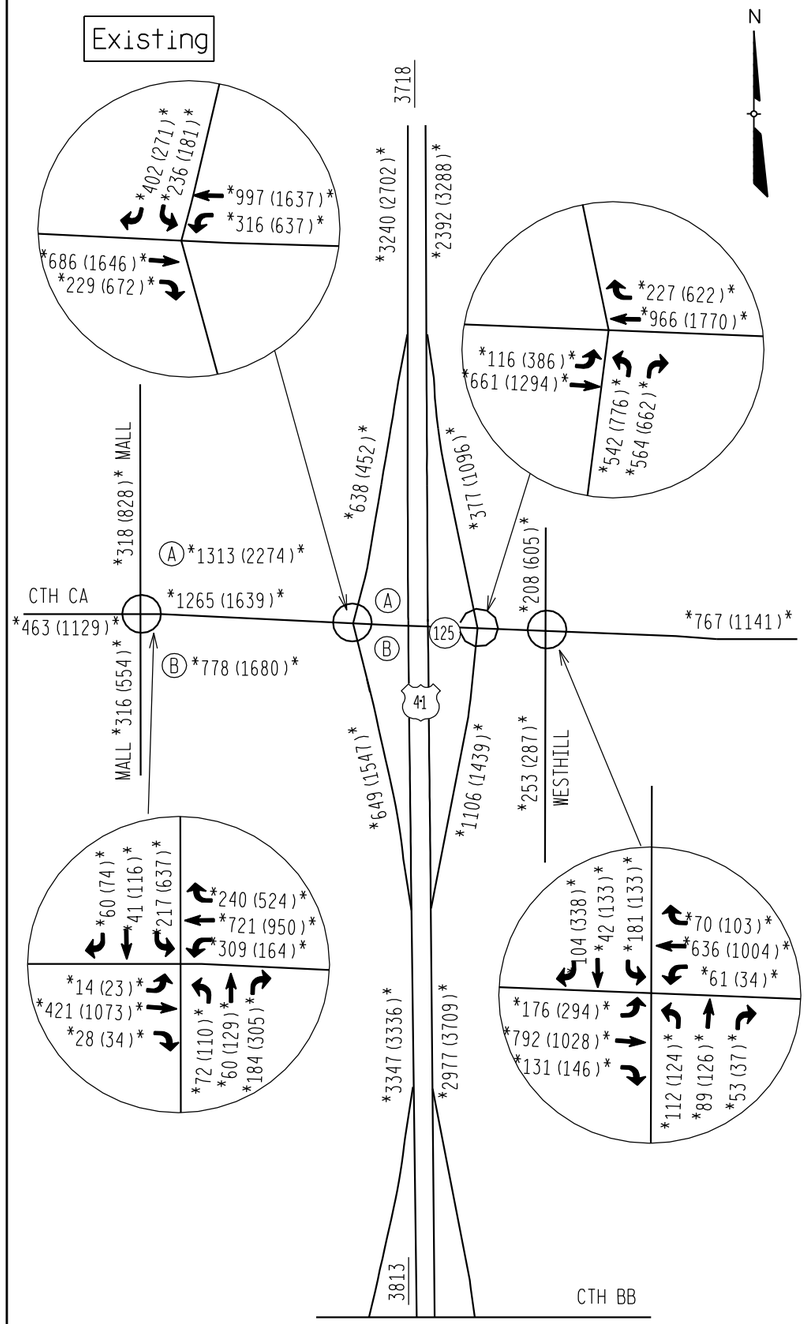
USH 41/STH 125 BACKBONE INTERCHANGE NEEDS & IMPROVEMENT STUDY

XXX = 2035 ADT
-XXX- = 2020 ADT
XXX = Existing ADT

PROJECT NO. 91355 | FEBRUARY 2007

Average Daily Traffic (ADT)

EXHIBIT 4
SHEET 1 OF 1



EarthTech
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PROJECT NO. 91355 | FEBRUARY 2007

USH 41/STH 125
BACKBONE INTERCHANGE NEEDS & IMPROVEMENT STUDY

PEAK HOUR TRAFFIC VOLUMES AND TURNING MOVEMENTS

XX (XX) = 2035 AM Peak (PM Peak) *XX (XX)* = Existing AM Peak (PM Peak)
-XX (XX)- = 2020 AM Peak (PM Peak) XXX = K30 VOLUMES

EXHIBIT 5
SHEET 1 OF 1

FILE NAME: L:\work\Projects\91355\gra\NE\NE_USH 41_STH 125\USH41_ STH125PK.dgn
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PLOT DATE: 3/7/2007
PLOT TIME: 4:06:58 PM
PLOT SCALE: 1:640

SHORT- TERM ALTERNATIVE 1

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 125 (W COLLEGE AVENUE)
OUTAGAMIE COUNTY

USH 41 AUXILARY LANES SHOWN ON PREVIOUS EXHIBITS AND ARE INCLUDED IN THIS ALTERNATIVE

EXTEND BOX CULVERT

N MALL DR

SB OFF RAMP, 340 FT. DUAL LT. & DUAL RT. TURN LANES

IMPLEMENT NO RIGHT TURN ON RED

W COLLEGE AVE

STH 125

USH 41

STH 125

W COLLEGE AVE

N WESTHILL BLVD

MODIFY MEDIAN TO ACCOMMODATE LEFT TURN MOVEMENTS

INSTALL CONTROLLED RT. TURN LANE

NB OFF RAMP, 800 FT. DUAL LT. & DUAL RT. TURN LANES

S NICOLET RD

USH 41

S KOOLS CT

LEGEND

- EXISTING RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

N

SCALE 0' 100' 200'

ADVANTAGES

- IMPROVE LEVEL OF SERVICE (LOS)
- NO RIGHT OF WAY REQUIRED
- IMPROVES SAFETY OF RAMP RIGHT TURN MOVEMENTS

DISADVANTAGES

- DOES NOT IMPROVE OVERALL LEVELS OF SERVICE

WISCONSIN DEPARTMENT OF TRANSPORTATION

EarthTech
A tyco International Ltd. Company

EXHIBIT 6

FEBRUARY 2007

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LONG- TERM ALTERNATIVE 2

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 125 (W COLLEGE AVENUE)
OUTAGAMIE COUNTY

USH 41 AUXILARY LANES SHOWN ON PREVIOUS EXHIBITS AND ARE INCLUDED IN THIS ALTERNATIVE

LEGEND
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

N
SCALE 0' 100' 200'

EXTEND BOX CULVERT
N MALL DR
USH 41
NB ON RAMP, 570 FT. DUAL LANES
SB OFF RAMP, 340 FT. DUAL LT. & DUAL RT. TURN LANES
WB DUAL LT. TURN LANES
NEW THRU LANE
RETAINING WALL
EXTEND BOX CULVERT
RIGHT TURN LANE
0.75 AC. +/-
LOOK AHEAD LEFT TURN LANES
N WESTHILL BLVD
RIGHT IN RIGHT OUT
RIGHT TURN LANE
W COLLEGE AVE STH 125
W COLLEGE AVE STH 125
RIGHT IN RIGHT OUT
LOOK AHEAD LEFT TURN LANES
MODIFY MEDIAN TO ACCOMMODATE LEFT TURN MOVEMENTS
EB DUAL LT. TURN LANE
0.25 AC. +/-
EXTEND BOX CULVERT
S NICOLET RD
SB ON RAMP, 500 FT. DUAL LANES
NB OFF RAMP, 800 FT. DUAL LT. & DUAL RT. TURN LANES
S KOOLS CT
USH 41

ADVANTAGES

- IMPROVED LEVEL OF SERVICE (LOS)
- MINIMAL RIGHT OF WAY IMPACT
- ACCESS SPACING TO MALL/NICHOLET IMPROVED

DISADVANTAGES

- EASE OF ACCESS TO BUSINESS NORTH AND SOUTH TO STH 125 REDUCED

WISCONSIN DEPARTMENT OF TRANSPORTATION
EarthTech
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EXHIBIT 7
FEBRUARY 2007

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LONG- TERM ALTERNATIVE 3

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 125 (W COLLEGE AVENUE)
OUTAGAMIE COUNTY

LEGEND
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

N
0' 100' 200'
SCALE

USH 41 AUXILARY LANES SHOWN ON PREVIOUS EXHIBITS AND ARE INCLUDED IN THIS ALTERNATIVE

N METRO DR
HANSKIMMEL DR
RIVER DR
FOX
USH 41

EXTEND BOX CULVERT
N MALL DR
TRAFFIC SIGNAL IMPROVEMENTS
52' CUL DE SAC
W GRANDE MARKET DR
0.89 AC. +/-
SB OFFRAMP, 340 FT. DUAL LT. & DUAL RT. TURN LANES
RIGHT TURN LANE
WB DUAL LT. TURN LANES
NEW THRU LANE
RETAINING WALL
NB ONRAMP, 570 FT. DUAL LANES
EXTEND BOX CULVERT
RIGHT TURN LANE
LOOK AHEAD LEFT TURN LANES
STH 125
W COLLEGE AVE
LEFTT TURN LANE
RIGHT TURN LANE
TRAFFIC SIGNAL IMPROVEMENTS
1.06 AC. +/-
52' CUL DE SAC
LOOK AHEAD LEFT TURN LANES
MODIFY MEDIAN TO ACCOMMODATE LEFT TURN MOVEMENTS
EB DUAL LT. TURN LANE
SB ONRAMP, 500 FT. DUAL LANES
EXTEND BOX CULVERT
NB OFFRAMP, 800 FT. DUAL LT. & DUAL RT. TURN LANES
W LAWRENCE ST
S NICOLET RD
USH 41

ADVANTAGES
- IMPROVED LEVEL OF SERVICE (LOS)
- IMPROVEMENT TO MALL/NICOLET ACCESS SPACING

DISADVANTAGES
- SUBSTANTIAL RIGHT OF WAY IMPACTS

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EXHIBIT 8
FEBRUARY 2007

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SHORT & LONG - TERM ALTERNATIVES 1, 2 & 3

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 96/STH 125
OUTAGAMIE COUNTY

LEGEND
- EXISTING RIGHT OF WAY
- NEW RIGHT OF WAY
- LANE LINES
- PROPOSED IMPROVEMENTS

N
SCALE 0' 150' 300'

ADD AUXILIARY LANES

EXTEND BOX CULVERT

1.0 ACRES +/-

RETAINING WALL

USH 41

STH 96

W WHITMAN RD

ADVANTAGES

- DECREASE IN WEAVING
- IMPROVED FREEWAY FLOW
- NO RELOCATIONS

DISADVANTAGES

- DISRUPTION TO USH 41 TRAFFIC
- MOVING GRAND CHUTE SANITARY SEWER
- REAL ESTATE ACQUISITION

WISCONSIN DEPARTMENT OF TRANSPORTATION

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EXHIBIT 9
FEBRUARY 2007

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Backbone Route	Crossroad
USH 41	STH 125
Region	**Location**
North East	City of Appleton
Interchange Type	**Crossroad Function**
Diamond	Rural Minor Arterial
Ramp Terminal	**Bridge Sufficiency**
Signalized	B-44-155 = 95.9
	B-44-156 = 95.9
Bridge Hits	**Bridge Service Life**
0	Constructed –1992



		NB Diverge	NB Merge	SB Diverge	SB Merge	NB Ramps	SB Ramps	FWY North	FWY South	Total	Notes
LOS	2035	C(D)	B(C)	D(C)	C(C)	E(F)	E(F)	-D-	-D-	--	AM Peak (PM Peak) -K30-
	2020	C(C)	B(C)	C(C)	C(C)	E(F)	D(F)	-C-	-D-	--	
	2005	C(C)	B(B)	C(B)	B(C)	D(F)	C(C)	-C-	-C-	--	
Queue	2035	--	--	--	--	>1500	1226	--	--	--	Max Length of Queue Distance from Terminal to Gore: NB = 1050 SB =1000
	2020	--	--	--	--	1280	806	--	--	--	
	2005	--	--	--	--	441	308	--	--	--	
Crashes	(2000-2004)	4	2	1	6	70	33	--	--	116	
	Severity	0.25	0	1.00	0.67	0.39	0.30	--	--	--	(INJ+FAT) / Total Crash
	Rate	13	10	5	20	0.87	0.66	--	--	--	Merge & Diverge = HMVMT Intersection = MEV

		NB Diverge	NB Weave	SB Weave	SB Merge	NB Ramps	SB Ramps	FWY North	FWY South	Total	Notes
LOS	L-T Alt. 3 2035	C(D)	C(C)	C(C)	C(C)	C(D)	C(C)	-D-	-D-	--	AM Peak (PM Peak) -K30-
	L-T Alt. 2 2035	C(D)	C(C)	C(C)	C(C)	C(D)	C(C)	-D-	-D-	--	
	S-T Alt. 1 2020	C(C)	C(C)	C(C)	C(C)	C(F)	B(F)	-C-	-D-	--	
Queue	L-T Alt. 3 2035	--	--	--	--	339	594	--	--	--	Max Length of Queue Distance from Terminal to Gore NB = 1050 SB = 1000
	L-T Alt. 2 2035	--	--	--	--	339	594	--	--	--	
	S-T Alt. 1 2020	--	--	--	--	440	672	--	--	--	
Crash Benefits	L-T Alt. 3	0	1	1	0	91	52	--	--	145	Crash Benefits calculated by: Reduction in PD Crashes *7,000 + Reduction in INJ Crashes *35,000 + Reduction in FAT Crashes *70,000 (Benefits expressed in thousands)
	L-T Alt. 2	0	1	1	0	91	52	--	--	145	
	S-T Alt. 1	0	1	1	0	91	44	--	--	137	

Existing Geometric Deficiencies				
Freeway/Ramps (USH 41)	Acceptable	Poor	Severe	Comments
Ramp Design Speed	☒	☐	☐	NB off ramp crest curve speed rating 60 mph, using 2001 GDHS, therefore within acceptable. NB off ramp sag curve speed rating 20 mph, less than 30 mph design speed near side road.
Ramp Horizontal Alignment	☐	☒	☐	SE ramp connection curve rating of 22 mph. NB on ramp curve speed rating of 54 mph. SB off ramp curve speed rating of 54 mph.
Ramp Merge/Diverge	☐	☒	☐	Ramp taper deficient for NB on ramp.
Stopping Sight Distance	☒	☐	☐	--
Crossroad (STH 125)				
Intersection Sight Distance	☒	☐	☐	Signalized intersection.
Access Control	☐	☒	☐	Mall Drive is 500' from SB ramp terminal. Minimum standard is 1000'.
Bridge (Mainline over)				
Bridge Width	☒	☐	☐	Clear width is 57' & req. width is 56'. Bridges have Ratings of 96.7.
Vertical Clearance	☒	☐	☐	Vertical clearance is greater than 16' required.
Lateral Clearance	☒	☐	☐	--

Alternative Construction Costs			
	Total Cost	Structure Costs	ROW Costs
Short Term Alternative	**$2,470,000**	$80,000	$0
Long Term Alternative 2	**$8,360,000**	$290,000	$275,000
Long Term Alternative 3	**$11,300,000**	$290,000	$1,641,000

Preferred Alternative Discussion

BACKBONE INTERCHANGE NEEDS AND IMPROVEMENT STUDY
PROJECT I.D. 1111- 11- 99
USH 41 & STH 125 (W COLLEGE AVENUE)
OUTAGAMIE COUNTY
DEFICIENCIES

DEFICIENCY: USH 41 TYPICAL SECTION
PAVED SHOULDER OUTSIDE = 6 FT. (REQUIRES 12 FT.)
PAVED SHOULDER INSIDE = 11 FT. (REQUIRES 12 FT.)

DEFICIENCY: HORIZONTAL CURVE
SPEED RATING = 54 MPH

DEFICIENCY: ACCESS SPACING
SEPARATION BETWEEN RAMP TERMINAL & MALL DR.
DESIRABLE = 1000 FT. EXISTING = 500 FT.

DEFICIENCY: ACCELERATION TAPER
EXISTING LENGTH = 1150 FT (REQUIRES 1200 FT)

DEFICIENCY: HORIZONTAL CURVE
SPEED RATING = 54 MPH

DEFICIENCY: VERTICAL CURVE
SPEED RATING = 20 MPH

DEFICIENCY: CREST VERTICAL CURVE (1990 GDHS)
SPEED RATING = 51 MPH (1990 GDHS)
SPEED RATING = 65 MPH (2001 GDHS)

DEFICIENCY: CREST VERTICAL CURVE (1990 GDHS)
SPEED RATING = 49 MPH (1990 GDHS)
SPEED RATING = 60 MPH (2001 GDHS)

DEFICIENCY: USH 41 TYPICAL SECTION
PAVED SHOULDER OUTSIDE = 6 FT. (REQUIRES 12 FT.)
PAVED SHOULDER INSIDE = 11 FT. (REQUIRES 12 FT.)

MALL DR
STH 125
W COLLEGE AVE
S NICOLET RD
USH 41
WESTHILL
KOOLS CT

WISCONSIN DEPARTMENT OF TRANSPORTATION

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N

0' 150' 300'
SCALE

EXHIBIT 11

FEBRUARY 2007

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ENVIRONMENTAL SCREENING ANALYSIS
SHORT-TERM ALTERNATIVE 1

USH 41 and STH 125 Interchange
Outagamie County

Environmental Factor	Potential Impact Level				Comments
	High	Med	Low	NA	
Socio-Economic Factor					
Displacements				X	No displacements required
Natural Environment Factors					
Wetlands				X	No wetland conversion
Streams and Floodplains			X		Extension of box culvert over Mud Creek, project is not in floodplain.
Lakes or Other Open Water				X	None in project area
Threatened and Endangered Species			X		Threatened species exist in project area
Cultural Environmental Factors					
Section 4(f) and 6(f): Parks, Wildlife Refuge Areas				X	None in project area
Historic Resources				X	None in project area
Archaeological Resources			X		Known site exists, assumed to be disturbed, field check.
Hazardous Substances or USTs				X	None in project area

ENVIRONMENTAL SCREENING ANALYSIS
LONG-TERM ALTERNATIVE 2

USH 41 and STH 125 Interchange
Outagamie County

Environmental Factor	Potential Impact Level				Comments
	High	Med	Low	NA	
Socio-Economic Factor					
Displacements				X	No displacements required
Natural Environment Factors					
Wetlands				X	No wetland conversion
Streams and Floodplains			X		Extension of box culverts over Mud Creek, project is not in floodplain.
Lakes or Other Open Water				X	None in project area
Threatened and Endangered Species			X		Threatened species exist in project area
Cultural Environmental Factors					
Section 4(f) and 6(f): Parks, Wildlife Refuge Areas				X	None in project area
Historic Resources				X	None in project area
Archaeological Resources			X		Known site exists, assumed to be disturbed, field check.
Hazardous Substances or USTs				X	None in project area

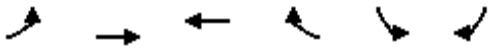
ENVIRONMENTAL SCREENING ANALYSIS
LONG-TERM ALTERNATIVE 3

USH 41 and STH 125 Interchange
Outagamie County

Environmental Factor	Potential Impact Level				Comments
	High	Med	Low	NA	
Socio-Economic Factor					
Displacements	X				Potential for two Auto Dealership Displacements
Natural Environment Factors					
Wetlands				X	No wetland conversion
Streams and Floodplains			X		Extension of box culverts over Mud Creek, project is not in floodplain.
Lakes or Other Open Water				X	None in project area
Threatened and Endangered Species			X		Threatened species exist in project area
Cultural Environmental Factors					
Section 4(f) and 6(f): Parks, Wildlife Refuge Areas				X	None in project area
Historic Resources				X	None in project area
Archaeological Resources			X		Known site exists, assumed to be disturbed, field check.
Hazardous Substances or USTs				X	None in project area

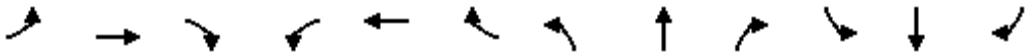
Appendix K

Level of Service Report



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	160	1015	575	370	290	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1763	3539	3505	1568	1770	1583
Flt Permitted	0.20	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	370	3539	3505	1568	1770	1583
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	211	1336	757	487	382	566
RTOR Reduction (vph)	0	0	0	317	0	194
Lane Group Flow (vph)	211	1336	757	170	382	372
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Bus Blockages (#/hr)	1	0	0	0	0	0
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	44.0	44.0	29.5	29.5	34.0	34.0
Effective Green, g (s)	46.0	46.0	31.5	31.5	36.0	36.0
Actuated g/C Ratio	0.51	0.51	0.35	0.35	0.40	0.40
Clearance Time (s)	5.0	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)	367	1809	1227	549	708	633
v/s Ratio Prot	0.07	c0.38	0.22		0.22	
v/s Ratio Perm	0.22			0.11		c0.24
v/c Ratio	0.57	0.74	0.62	0.31	0.54	0.59
Uniform Delay, d1	14.2	17.3	24.2	21.3	20.7	21.2
Progression Factor	0.47	0.58	0.64	6.37	1.00	1.00
Incremental Delay, d2	1.6	2.0	1.1	0.3	2.9	4.0
Delay (s)	8.3	12.1	16.6	136.3	23.6	25.2
Level of Service	A	B	B	F	C	C
Approach Delay (s)		11.6	63.4		24.5	
Approach LOS		B	E		C	

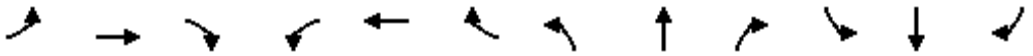
Intersection Summary			
HCM Average Control Delay	32.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	380	920	0	0	795	75	150	0	490	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	2.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3539	1583		1671	1495			
Flt Permitted	0.14	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	259	3574			3539	1583		1671	1495			
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	500	1211	0	0	1046	99	197	0	645	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	70	0	0	0	0	0	0
Lane Group Flow (vph)	500	1211	0	0	1046	29	0	197	645	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	8%	8%	8%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Free			
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8		Free			
Actuated Green, G (s)	47.0	47.0			24.0	24.0		31.0	90.0			
Effective Green, g (s)	48.0	49.0			26.0	26.0		33.0	90.0			
Actuated g/C Ratio	0.53	0.54			0.29	0.29		0.37	1.00			
Clearance Time (s)	5.0	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)	461	1946			1022	457		613	1495			
v/s Ratio Prot	c0.23	0.34			0.30							
v/s Ratio Perm	c0.35					0.02		0.12	c0.43			
v/c Ratio	1.08	0.62			1.02	0.06		0.32	0.43			
Uniform Delay, d1	25.8	14.1			32.0	23.2		20.5	0.0			
Progression Factor	0.80	0.99			0.93	1.77		1.00	1.00			
Incremental Delay, d2	59.4	1.1			33.5	0.2		1.4	0.9			
Delay (s)	80.1	15.1			63.3	41.2		21.8	0.9			
Level of Service	F	B			E	D		C	A			
Approach Delay (s)		34.1			61.4			5.8			0.0	
Approach LOS		C			E			A			A	

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

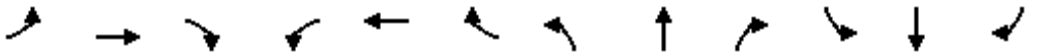
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	940	25	160	645	195	5	15	65	170	55	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583	1719	1810	1538	1770	1754	
Flt Permitted	0.29	1.00	1.00	0.09	1.00	1.00	0.68	1.00	1.00	0.52	1.00	
Satd. Flow (perm)	542	3574	1599	172	3539	1583	1235	1810	1538	973	1754	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	64	1205	32	205	827	250	6	19	83	218	71	45
RTOR Reduction (vph)	0	0	17	0	0	124	0	0	72	0	26	0
Lane Group Flow (vph)	64	1205	15	205	827	126	6	19	11	218	90	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	43.8	38.2	38.2	52.2	42.4	42.4	10.4	10.4	10.4	24.0	24.0	
Effective Green, g (s)	45.8	41.2	41.2	54.0	45.4	45.4	12.4	12.4	12.4	23.0	26.0	
Actuated g/C Ratio	0.51	0.46	0.46	0.60	0.50	0.50	0.14	0.14	0.14	0.26	0.29	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	367	1636	732	295	1785	799	170	249	212	334	507	
v/s Ratio Prot	0.01	c0.34		c0.08	0.23			0.01		c0.07	0.05	
v/s Ratio Perm	0.08		0.01	0.33		0.08	0.00		0.01	c0.10		
v/c Ratio	0.17	0.74	0.02	0.69	0.46	0.16	0.04	0.08	0.05	0.65	0.18	
Uniform Delay, d1	11.5	20.0	13.4	18.3	14.4	12.0	33.6	33.8	33.7	28.5	24.0	
Progression Factor	1.00	1.00	1.00	1.97	0.55	0.16	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	3.0	0.1	5.3	0.7	0.3	0.4	0.6	0.5	4.5	0.8	
Delay (s)	11.7	23.0	13.4	41.4	8.6	2.3	34.0	34.4	34.2	33.1	24.8	
Level of Service	B	C	B	D	A	A	C	C	C	C	C	
Approach Delay (s)		22.2			12.6			34.2			30.2	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

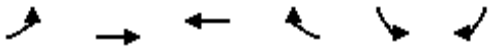
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	715	665	290	665	30	115	30	80	40	80	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1665	1702	1568	1787	1732	
Flt Permitted	0.36	1.00	1.00	0.14	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	675	3574	1599	255	3574	1599	1665	1702	1568	1787	1732	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	41	831	773	337	773	35	134	35	93	47	93	105
RTOR Reduction (vph)	0	0	513	0	0	17	0	0	82	0	57	0
Lane Group Flow (vph)	41	831	260	337	773	18	83	86	11	47	141	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2			3			
Actuated Green, G (s)	27.5	24.5	24.5	49.3	41.3	41.3	8.0	8.0	8.0	12.7	12.7	
Effective Green, g (s)	29.5	27.5	27.5	50.3	44.3	44.3	10.5	10.5	10.5	15.2	15.2	
Actuated g/C Ratio	0.33	0.31	0.31	0.56	0.49	0.49	0.12	0.12	0.12	0.17	0.17	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	271	1092	489	497	1759	787	194	199	183	302	293	
v/s Ratio Prot	0.01	c0.23		c0.16	0.22		0.05	c0.05		0.03	c0.08	
v/s Ratio Perm	0.04		0.16	0.22		0.01			0.01			
v/c Ratio	0.15	0.76	0.53	0.68	0.44	0.02	0.43	0.43	0.06	0.16	0.48	
Uniform Delay, d1	20.8	28.3	25.9	18.4	14.8	11.7	37.0	37.0	35.4	31.9	33.8	
Progression Factor	1.33	1.13	3.19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	4.2	3.4	3.7	0.8	0.1	1.5	1.5	0.1	0.2	1.2	
Delay (s)	28.0	36.2	86.1	22.1	15.6	11.8	38.5	38.5	35.5	32.2	35.1	
Level of Service	C	D	F	C	B	B	D	D	D	C	D	
Approach Delay (s)		59.4			17.4			37.4			34.5	
Approach LOS		E			B			D			C	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

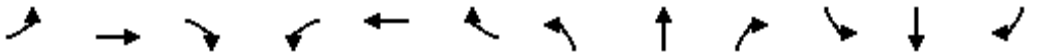
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	350	1125	1135	275	185	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3574	1599	1752	1568
Flt Permitted	0.09	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	175	3539	3574	1599	1752	1568
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	398	1278	1290	312	210	625
RTOR Reduction (vph)	0	0	0	158	0	137
Lane Group Flow (vph)	398	1278	1290	154	210	488
Heavy Vehicles (%)	2%	2%	1%	1%	3%	3%
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	58.0	58.0	45.0	45.0	25.0	25.0
Effective Green, g (s)	60.0	60.0	47.0	47.0	27.0	27.0
Actuated g/C Ratio	0.63	0.63	0.49	0.49	0.28	0.28
Clearance Time (s)	5.0	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)	278	2235	1768	791	498	446
v/s Ratio Prot	c0.15	0.36	0.36		0.12	
v/s Ratio Perm	c0.75			0.10		c0.31
v/c Ratio	1.43	0.57	0.73	0.20	0.42	1.09
Uniform Delay, d1	25.6	10.1	19.0	13.4	27.7	34.0
Progression Factor	1.44	0.55	0.39	0.63	1.00	1.00
Incremental Delay, d2	209.6	0.8	1.5	0.2	2.6	70.2
Delay (s)	246.6	6.3	8.8	8.7	30.3	104.2
Level of Service	F	A	A	A	C	F
Approach Delay (s)		63.4	8.8		85.6	
Approach LOS		E	A		F	

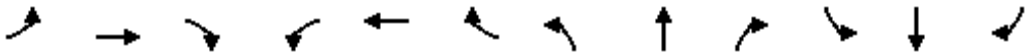
Intersection Summary			
HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.30		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	375	935	0	0	1175	185	240	0	535	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	2.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1780	3574			3574	1599		1752	1568			
Flt Permitted	0.11	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	198	3574			3574	1599		1752	1568			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	408	1016	0	0	1277	201	261	0	582	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	127	0	0	0	0	0	0
Lane Group Flow (vph)	408	1016	0	0	1277	74	0	261	582	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	pm+pt					Perm	Perm		Free			
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8		Free			
Actuated Green, G (s)	58.0	58.0			32.8	32.8		25.0	95.0			
Effective Green, g (s)	59.0	60.0			34.8	34.8		27.0	95.0			
Actuated g/C Ratio	0.62	0.63			0.37	0.37		0.28	1.00			
Clearance Time (s)	5.0	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)	476	2257			1309	586		498	1568			
v/s Ratio Prot	c0.19	0.28			c0.36							
v/s Ratio Perm	0.34					0.05		0.15	0.37			
v/c Ratio	0.86	0.45			0.98	0.13		0.52	0.37			
Uniform Delay, d1	26.1	9.0			29.7	20.0		28.6	0.0			
Progression Factor	1.20	1.99			1.18	3.11		1.00	1.00			
Incremental Delay, d2	12.1	0.6			17.0	0.3		3.9	0.7			
Delay (s)	43.4	18.5			52.0	62.6		32.5	0.7			
Level of Service	D	B			D	E		C	A			
Approach Delay (s)		25.6			53.4			10.5			0.0	
Approach LOS		C			D			B			A	

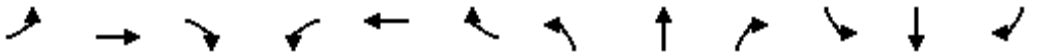
Intersection Summary			
HCM Average Control Delay	33.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	940	45	290	1155	240	30	85	345	190	90	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1787	3574	1599	1787	1881	1599	1770	1741	
Flt Permitted	0.13	1.00	1.00	0.15	1.00	1.00	0.65	1.00	1.00	0.48	1.00	
Satd. Flow (perm)	236	3539	1583	288	3574	1599	1218	1881	1599	903	1741	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	1022	49	315	1255	261	33	92	375	207	98	76
RTOR Reduction (vph)	0	0	26	0	0	126	0	0	225	0	29	0
Lane Group Flow (vph)	65	1022	23	315	1255	135	33	92	150	207	145	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	47.9	42.0	42.0	56.1	46.1	46.1	11.4	11.4	11.4	25.0	25.0	
Effective Green, g (s)	49.9	45.0	45.0	58.0	49.1	49.1	13.4	13.4	13.4	24.0	27.0	
Actuated g/C Ratio	0.53	0.47	0.47	0.61	0.52	0.52	0.14	0.14	0.14	0.25	0.28	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	235	1676	750	349	1847	826	172	265	226	316	495	
v/s Ratio Prot	0.02	0.29		c0.10	0.35			0.05		c0.07	0.08	
v/s Ratio Perm	0.13		0.01	c0.45		0.08	0.03		c0.09	0.10		
v/c Ratio	0.28	0.61	0.03	0.90	0.68	0.16	0.19	0.35	0.66	0.66	0.29	
Uniform Delay, d1	13.3	18.5	13.4	16.5	17.1	12.1	36.0	36.8	38.7	30.2	26.5	
Progression Factor	1.00	1.00	1.00	0.74	0.94	1.97	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	1.7	0.1	15.2	1.0	0.2	2.5	3.6	14.3	4.8	1.5	
Delay (s)	13.9	20.2	13.4	27.4	17.2	24.1	38.5	40.4	53.0	35.0	28.0	
Level of Service	B	C	B	C	B	C	D	D	D	C	C	
Approach Delay (s)		19.5			19.9			49.7			31.8	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

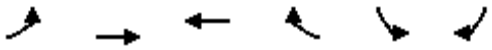
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	1080	240	190	930	75	365	130	285	45	90	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1698	1745	1599	1787	1769	
Flt Permitted	0.13	1.00	1.00	0.12	1.00	1.00	0.95	0.98	1.00	0.95	1.00	
Satd. Flow (perm)	241	3574	1599	231	3574	1599	1698	1745	1599	1787	1769	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	153	1102	245	194	949	77	372	133	291	46	92	61
RTOR Reduction (vph)	0	0	158	0	0	38	0	0	223	0	25	0
Lane Group Flow (vph)	153	1102	87	194	949	39	249	256	68	46	128	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2			3			
Actuated Green, G (s)	38.8	30.6	30.6	40.8	31.6	31.6	19.6	19.6	19.6	10.6	10.6	
Effective Green, g (s)	40.8	33.6	33.6	42.8	34.6	34.6	22.1	22.1	22.1	13.1	13.1	
Actuated g/C Ratio	0.43	0.35	0.35	0.45	0.36	0.36	0.23	0.23	0.23	0.14	0.14	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	253	1264	566	271	1302	582	395	406	372	246	244	
v/s Ratio Prot	0.06	c0.31		c0.08	0.27		0.15	c0.15		0.03	c0.07	
v/s Ratio Perm	0.20		0.05	0.25		0.02			0.04			
v/c Ratio	0.60	0.87	0.15	0.72	0.73	0.07	0.63	0.63	0.18	0.19	0.52	
Uniform Delay, d1	19.3	28.7	21.0	20.4	26.1	19.7	32.8	32.8	29.2	36.2	38.1	
Progression Factor	0.95	0.74	0.83	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.7	7.9	0.5	8.7	3.6	0.2	3.3	3.2	0.2	0.4	2.0	
Delay (s)	22.0	29.2	17.8	29.1	29.7	19.9	36.0	36.0	29.4	36.6	40.1	
Level of Service	C	C	B	C	C	B	D	D	C	D	D	
Approach Delay (s)		26.6			29.0			33.6			39.3	
Approach LOS		C			C			C			D	

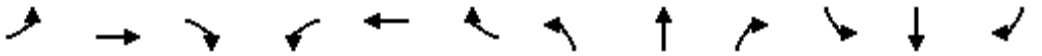
Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	254	1460	903	692	331	664
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	4.0	4.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1763	3539	3505	1568	1770	2787
Flt Permitted	0.08	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	149	3539	3505	1568	1770	2787
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	334	1921	1188	911	436	874
RTOR Reduction (vph)	0	0	0	422	0	0
Lane Group Flow (vph)	334	1921	1188	489	436	874
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Bus Blockages (#/hr)	1	0	0	0	0	0
Turn Type	pm+pt			Perm		pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2			6		4
Actuated Green, G (s)	71.0	71.0	46.8	46.8	32.0	51.2
Effective Green, g (s)	73.0	73.0	48.8	48.8	34.0	55.2
Actuated g/C Ratio	0.63	0.63	0.42	0.42	0.30	0.48
Clearance Time (s)	5.0	6.0	6.0	6.0	6.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	392	2246	1487	665	523	1338
v/s Ratio Prot	0.16	c0.54	0.34		c0.25	0.12
v/s Ratio Perm	0.38			0.31		0.19
v/c Ratio	0.85	0.86	0.80	0.74	0.83	0.65
Uniform Delay, d1	33.1	16.8	28.8	27.7	37.9	22.6
Progression Factor	1.10	0.50	0.35	2.64	1.00	1.00
Incremental Delay, d2	7.6	1.9	1.8	1.8	14.5	1.2
Delay (s)	43.9	10.2	11.8	74.8	52.3	23.8
Level of Service	D	B	B	E	D	C
Approach Delay (s)		15.2	39.1		33.3	
Approach LOS		B	D		C	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.4%	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												
Volume (vph)	540	1100	0	0	1378	85	173	0	541	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0			4.0	4.0	2.0	2.0	2.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1787	3574			3539	1583	1588	1588	1495			
Flt Permitted	0.07	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	131	3574			3539	1583	1588	1588	1495			
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	711	1447	0	0	1813	112	228	0	712	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	54	0	0	0	0	0	0
Lane Group Flow (vph)	711	1447	0	0	1813	58	114	114	712	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	8%	8%	8%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Free			
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8		Free			
Actuated Green, G (s)	91.7	91.7			53.0	53.0	13.3	13.3	115.0			
Effective Green, g (s)	92.7	93.7			55.0	55.0	15.3	15.3	115.0			
Actuated g/C Ratio	0.81	0.81			0.48	0.48	0.13	0.13	1.00			
Clearance Time (s)	4.5	6.0			6.0	6.0	4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	612	2912			1693	757	211	211	1495			
v/s Ratio Prot	c0.36	0.40			0.51							
v/s Ratio Perm	c0.58					0.04	0.07	0.07	c0.48			
v/c Ratio	1.16	0.50			1.07	0.08	0.54	0.54	0.48			
Uniform Delay, d1	35.4	3.3			30.0	16.3	46.6	46.6	0.0			
Progression Factor	0.90	1.52			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	82.1	0.3			43.6	0.2	2.8	2.8	1.1			
Delay (s)	113.8	5.3			73.6	16.4	49.4	49.4	1.1			
Level of Service	F	A			E	B	D	D	A			
Approach Delay (s)		41.1			70.3			12.8			0.0	
Approach LOS		D			E			B			A	

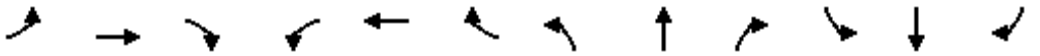
Intersection Summary			
HCM Average Control Delay	47.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	3.5
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	221	1239	47	255	1043	314	30	59	77	344	273	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583	1719	3438	1538	1770	3259	
Flt Permitted	0.08	1.00	1.00	0.08	1.00	1.00	0.37	1.00	1.00	0.49	1.00	
Satd. Flow (perm)	145	3574	1599	151	3539	1583	671	3438	1538	909	3259	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	283	1588	60	327	1337	403	38	76	99	441	350	390
RTOR Reduction (vph)	0	0	22	0	0	175	0	0	89	0	175	0
Lane Group Flow (vph)	283	1588	38	327	1337	228	38	76	10	441	565	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	67.5	51.0	51.0	62.5	48.5	48.5	10.0	10.0	10.0	32.0	32.0	
Effective Green, g (s)	69.5	54.0	54.0	64.5	51.5	51.5	12.0	12.0	12.0	31.0	34.0	
Actuated g/C Ratio	0.60	0.47	0.47	0.56	0.45	0.45	0.10	0.10	0.10	0.27	0.30	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	338	1678	751	296	1585	709	70	359	160	380	964	
v/s Ratio Prot	c0.13	0.44		c0.14	0.38			0.02		c0.18	0.17	
v/s Ratio Perm	0.38		0.02	c0.48		0.14	0.06		0.01	c0.13		
v/c Ratio	0.84	0.95	0.05	1.10	0.84	0.32	0.54	0.21	0.06	1.16	0.59	
Uniform Delay, d1	33.5	29.1	16.6	36.9	28.2	20.5	48.9	47.2	46.4	40.2	34.5	
Progression Factor	1.00	1.00	1.00	0.95	0.80	0.94	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	16.3	12.5	0.1	74.8	4.0	0.8	27.0	1.3	0.8	97.6	2.6	
Delay (s)	49.8	41.6	16.7	110.0	26.4	20.1	75.9	48.5	47.2	137.8	37.1	
Level of Service	D	D	B	F	C	C	E	D	D	F	D	
Approach Delay (s)		42.0			38.4			52.8			74.7	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

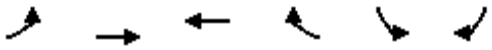
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	875	762	407	1060	56	131	81	89	102	228	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1665	1730	1568	1787	1770	
Flt Permitted	0.14	1.00	1.00	0.09	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	260	3574	1599	167	3574	1599	1665	1730	1568	1787	1770	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	74	1017	886	473	1233	65	152	94	103	119	265	173
RTOR Reduction (vph)	0	0	225	0	0	20	0	0	94	0	20	0
Lane Group Flow (vph)	74	1017	661	473	1233	45	120	126	9	119	418	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2			3			
Actuated Green, G (s)	44.1	40.1	40.1	64.1	55.1	55.1	8.0	8.0	8.0	28.2	28.2	
Effective Green, g (s)	46.1	43.1	43.1	65.1	58.1	58.1	10.5	10.5	10.5	30.7	30.7	
Actuated g/C Ratio	0.38	0.36	0.36	0.54	0.48	0.48	0.09	0.09	0.09	0.26	0.26	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	163	1280	573	360	1726	772	145	151	137	456	452	
v/s Ratio Prot	0.02	0.28		c0.22	0.34		0.07	c0.07		0.07	c0.24	
v/s Ratio Perm	0.15		0.41	c0.49		0.03			0.01			
v/c Ratio	0.45	0.79	1.15	1.31	0.71	0.06	0.83	0.83	0.07	0.26	0.92	
Uniform Delay, d1	25.2	34.6	38.6	37.8	24.5	16.5	54.0	54.0	50.4	35.7	43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.0	5.2	87.5	159.8	2.6	0.1	30.5	30.9	0.2	0.3	24.7	
Delay (s)	27.2	39.8	126.1	197.5	27.1	16.7	84.5	85.0	50.6	36.1	68.3	
Level of Service	C	D	F	F	C	B	F	F	D	D	E	
Approach Delay (s)		78.0			72.2			74.7			61.4	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM Average Control Delay	73.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	120.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		

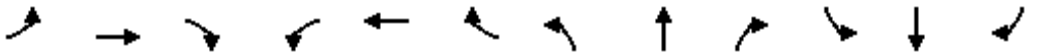
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	375	1576	1420	429	202	783
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	4.0	4.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3574	1599	1752	2760
Flt Permitted	0.08	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	144	3539	3574	1599	1752	2760
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	426	1791	1614	488	230	890
RTOR Reduction (vph)	0	0	0	249	0	0
Lane Group Flow (vph)	426	1791	1614	239	230	890
Heavy Vehicles (%)	2%	2%	1%	1%	3%	3%
Turn Type	pm+pt			Perm		pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2			6		4
Actuated Green, G (s)	72.5	72.5	46.9	46.9	15.5	36.1
Effective Green, g (s)	74.5	74.5	48.9	48.9	17.5	40.1
Actuated g/C Ratio	0.74	0.74	0.49	0.49	0.18	0.40
Clearance Time (s)	5.0	6.0	6.0	6.0	6.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	475	2637	1748	782	307	1107
v/s Ratio Prot	c0.20	0.51	0.45		0.13	c0.18
v/s Ratio Perm	c0.47			0.15		0.14
v/c Ratio	0.90	0.68	0.92	0.31	0.75	0.80
Uniform Delay, d1	30.6	6.6	23.8	15.3	39.2	26.5
Progression Factor	0.95	0.27	0.38	1.42	1.00	1.00
Incremental Delay, d2	10.4	0.7	4.5	0.3	15.4	4.3
Delay (s)	39.4	2.5	13.6	22.2	54.6	30.8
Level of Service	D	A	B	C	D	C
Approach Delay (s)		9.6	15.6		35.7	
Approach LOS		A	B		D	

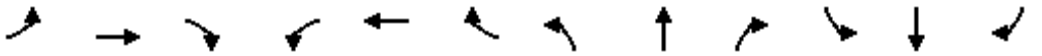
Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	517	1252	0	0	1535	210	361	0	846	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	2.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1780	3574			3574	1599	1665	1665	1568			
Flt Permitted	0.08	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	153	3574			3574	1599	1665	1665	1568			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	562	1361	0	0	1668	228	392	0	920	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	123	0	0	0	0	0	0
Lane Group Flow (vph)	562	1361	0	0	1668	105	196	196	920	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	pm+pt					Perm	Perm		Free			
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8		Free			
Actuated Green, G (s)	73.0	73.0			44.0	44.0	15.0	15.0	100.0			
Effective Green, g (s)	74.0	75.0			46.0	46.0	17.0	17.0	100.0			
Actuated g/C Ratio	0.74	0.75			0.46	0.46	0.17	0.17	1.00			
Clearance Time (s)	5.0	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)	520	2681			1644	736	283	283	1568			
v/s Ratio Prot	c0.27	0.38			0.47							
v/s Ratio Perm	c0.53					0.07	0.12	0.12	c0.59			
v/c Ratio	1.08	0.51			1.01	0.14	0.69	0.69	0.59			
Uniform Delay, d1	31.7	5.0			27.0	15.6	39.0	39.0	0.0			
Progression Factor	1.05	1.14			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	57.5	0.5			25.9	0.4	13.1	13.1	1.6			
Delay (s)	90.6	6.2			52.9	16.0	52.1	52.1	1.6			
Level of Service	F	A			D	B	D	D	A			
Approach Delay (s)		30.9			48.4			16.7			0.0	
Approach LOS		C			D			B			A	

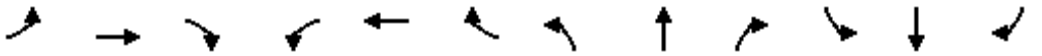
Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	479	1345	101	330	1657	277	110	323	394	221	275	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1787	3574	1599	1787	3574	1599	1770	3290	
Flt Permitted	0.08	1.00	1.00	0.09	1.00	1.00	0.40	1.00	1.00	0.29	1.00	
Satd. Flow (perm)	155	3539	1583	171	3574	1599	754	3574	1599	532	3290	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	521	1462	110	359	1801	301	120	351	428	240	299	264
RTOR Reduction (vph)	0	0	52	0	0	114	0	0	225	0	161	0
Lane Group Flow (vph)	521	1462	59	359	1801	187	120	351	203	240	402	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	65.0	47.0	47.0	57.0	43.0	43.0	11.0	11.0	11.0	21.0	21.0	
Effective Green, g (s)	67.0	50.0	50.0	59.0	46.0	46.0	13.0	13.0	13.0	20.0	23.0	
Actuated g/C Ratio	0.67	0.50	0.50	0.59	0.46	0.46	0.13	0.13	0.13	0.20	0.23	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	411	1770	792	343	1644	736	98	465	208	181	757	
v/s Ratio Prot	c0.24	0.41		0.16	0.50			0.10		c0.08	0.12	
v/s Ratio Perm	c0.61		0.04	0.46		0.12	0.16		0.13	c0.19		
v/c Ratio	1.27	0.83	0.07	1.05	1.10	0.25	1.22	0.75	0.97	1.33	0.53	
Uniform Delay, d1	32.4	21.3	13.0	30.2	27.0	16.5	43.5	42.0	43.3	39.2	33.8	
Progression Factor	1.00	1.00	1.00	1.22	0.91	0.66	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	138.5	4.6	0.2	47.0	48.5	0.4	163.1	10.9	56.1	179.7	2.7	
Delay (s)	170.9	25.9	13.2	83.9	72.9	11.3	206.6	52.8	99.4	218.9	36.4	
Level of Service	F	C	B	F	E	B	F	D	F	F	D	
Approach Delay (s)		61.3			67.0			95.5			91.0	
Approach LOS		E			E			F			F	

Intersection Summary			
HCM Average Control Delay	72.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.4%	ICU Level of Service	H
Analysis Period (min)	15		

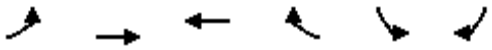
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	1520	263	276	1154	115	398	261	391	45	118	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1698	1767	1599	1787	1734	
Flt Permitted	0.09	1.00	1.00	0.10	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	177	3574	1599	190	3574	1599	1698	1767	1599	1787	1734	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	293	1551	268	282	1178	117	406	266	399	46	120	131
RTOR Reduction (vph)	0	0	102	0	0	38	0	0	330	0	36	0
Lane Group Flow (vph)	293	1551	166	282	1178	79	329	343	69	46	215	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2			3			
Actuated Green, G (s)	52.6	41.6	41.6	46.6	38.6	38.6	16.5	16.5	16.5	18.6	18.6	
Effective Green, g (s)	54.6	44.6	44.6	48.6	41.6	41.6	19.0	19.0	19.0	21.1	21.1	
Actuated g/C Ratio	0.50	0.41	0.41	0.44	0.38	0.38	0.17	0.17	0.17	0.19	0.19	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	264	1453	650	215	1355	606	294	306	277	344	334	
v/s Ratio Prot	c0.12	0.43		c0.11	0.33		0.19	c0.19		0.03	c0.12	
v/s Ratio Perm	0.43		0.10	c0.47		0.05			0.04			
v/c Ratio	1.11	1.07	0.26	1.31	0.87	0.13	1.12	1.12	0.25	0.13	0.65	
Uniform Delay, d1	32.0	32.6	21.6	28.8	31.5	22.2	45.4	45.4	39.2	36.7	40.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	88.1	43.9	0.9	169.4	7.8	0.4	88.4	88.1	0.5	0.2	4.2	
Delay (s)	120.0	76.5	22.5	198.2	39.3	22.7	133.8	133.4	39.7	36.9	45.1	
Level of Service	F	E	C	F	D	C	F	F	D	D	D	
Approach Delay (s)		75.7			66.5			98.6			43.8	
Approach LOS		E			E			F			D	

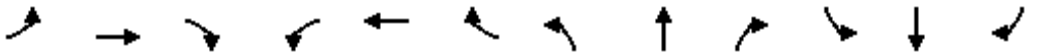
Intersection Summary			
HCM Average Control Delay	75.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	254	1460	903	692	331	664
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	4.0	4.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1763	3539	3505	1568	1770	2787
Flt Permitted	0.10	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	178	3539	3505	1568	1770	2787
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	334	1921	1188	911	436	874
RTOR Reduction (vph)	0	0	0	437	0	0
Lane Group Flow (vph)	334	1921	1188	474	436	874
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Bus Blockages (#/hr)	1	0	0	0	0	0
Turn Type	pm+pt			Perm		pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2			6		4
Actuated Green, G (s)	57.0	57.0	36.8	36.8	26.0	41.2
Effective Green, g (s)	59.0	59.0	38.8	38.8	28.0	45.2
Actuated g/C Ratio	0.62	0.62	0.41	0.41	0.29	0.48
Clearance Time (s)	5.0	6.0	6.0	6.0	6.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	398	2198	1432	640	522	1326
v/s Ratio Prot	0.15	c0.54	0.34		c0.25	0.12
v/s Ratio Perm	0.37			0.30		0.19
v/c Ratio	0.84	0.87	0.83	0.74	0.84	0.66
Uniform Delay, d1	25.7	14.9	25.1	23.8	31.3	19.0
Progression Factor	1.45	0.46	0.54	2.90	1.00	1.00
Incremental Delay, d2	5.4	1.9	3.4	3.7	14.6	1.2
Delay (s)	42.6	8.7	17.0	72.9	45.9	20.2
Level of Service	D	A	B	E	D	C
Approach Delay (s)		13.7	41.3		28.8	
Approach LOS		B	D		C	

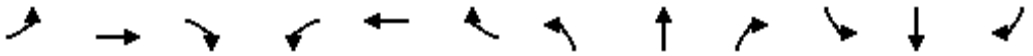
Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	540	1100	0	0	1378	85	173	0	541	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	4.0			4.0	4.0	2.0	2.0	2.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3467	3574			3539	1583	1588	1588	1495			
Flt Permitted	0.07	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	267	3574			3539	1583	1588	1588	1495			
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	711	1447	0	0	1813	112	228	0	712	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	51	0	0	0	0	0	0
Lane Group Flow (vph)	711	1447	0	0	1813	61	114	114	712	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	8%	8%	8%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Free			
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8		Free			
Actuated Green, G (s)	72.4	72.4			50.1	50.1	12.6	12.6	95.0			
Effective Green, g (s)	73.4	74.4			52.1	52.1	14.6	14.6	95.0			
Actuated g/C Ratio	0.77	0.78			0.55	0.55	0.15	0.15	1.00			
Clearance Time (s)	4.5	6.0			6.0	6.0	4.0	4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0				
Lane Grp Cap (vph)	840	2799			1941	868	244	244	1495			
v/s Ratio Prot	c0.17	0.40			c0.51							
v/s Ratio Perm	0.49					0.04	0.07	0.07	c0.48			
v/c Ratio	0.85	0.52			0.93	0.07	0.47	0.47	0.48			
Uniform Delay, d1	29.4	3.8			19.9	10.1	36.7	36.7	0.0			
Progression Factor	0.59	1.64			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	3.9	0.3			9.9	0.2	1.4	1.4	1.1			
Delay (s)	21.3	6.5			29.7	10.2	38.1	38.1	1.1			
Level of Service	C	A			C	B	D	D	A			
Approach Delay (s)		11.4			28.6			10.1			0.0	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	7.5
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

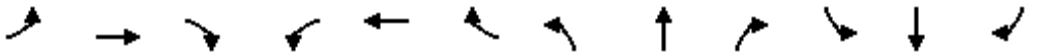
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	221	1239	47	255	1043	314	30	59	77	344	273	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583	1719	3438	1538	1770	3259	
Flt Permitted	0.10	1.00	1.00	0.10	1.00	1.00	0.37	1.00	1.00	0.49	1.00	
Satd. Flow (perm)	188	3574	1599	190	3539	1583	671	3438	1538	909	3259	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	283	1588	60	327	1337	403	38	76	99	441	350	390
RTOR Reduction (vph)	0	0	27	0	0	216	0	0	86	0	179	0
Lane Group Flow (vph)	283	1588	33	327	1337	187	38	76	13	441	561	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	50.7	39.0	39.0	49.3	38.3	38.3	10.0	10.0	10.0	27.0	27.0	
Effective Green, g (s)	52.7	42.0	42.0	51.3	41.3	41.3	12.0	12.0	12.0	26.0	29.0	
Actuated g/C Ratio	0.55	0.44	0.44	0.54	0.43	0.43	0.13	0.13	0.13	0.27	0.31	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	318	1580	707	302	1539	688	85	434	194	367	995	
v/s Ratio Prot	0.12	0.44		c0.14	0.38			0.02		c0.16	0.17	
v/s Ratio Perm	0.37		0.02	c0.45		0.12	0.06		0.01	c0.16		
v/c Ratio	0.89	1.01	0.05	1.08	0.87	0.27	0.45	0.18	0.06	1.20	0.56	
Uniform Delay, d1	25.6	26.5	15.1	28.1	24.4	17.2	38.4	37.1	36.6	33.1	27.7	
Progression Factor	1.00	1.00	1.00	1.02	0.78	1.10	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	24.7	23.9	0.1	66.4	4.8	0.7	16.1	0.9	0.6	114.0	2.3	
Delay (s)	50.3	50.4	15.2	95.2	23.8	19.6	54.5	38.0	37.2	147.1	30.0	
Level of Service	D	D	B	F	C	B	D	D	D	F	C	
Approach Delay (s)		49.3			34.3			40.6			73.7	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM Average Control Delay	48.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		

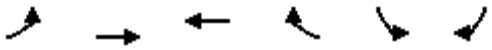
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	875	762	407	1060	56	131	81	89	102	228	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1665	1730	1568	1787	1770	
Flt Permitted	0.14	1.00	1.00	0.09	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	260	3574	1599	167	3574	1599	1665	1730	1568	1787	1770	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	74	1017	886	473	1233	65	152	94	103	119	265	173
RTOR Reduction (vph)	0	0	225	0	0	20	0	0	94	0	20	0
Lane Group Flow (vph)	74	1017	661	473	1233	45	120	126	9	119	418	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2			3			
Actuated Green, G (s)	44.1	40.1	40.1	64.1	55.1	55.1	8.0	8.0	8.0	28.2	28.2	
Effective Green, g (s)	46.1	43.1	43.1	65.1	58.1	58.1	10.5	10.5	10.5	30.7	30.7	
Actuated g/C Ratio	0.38	0.36	0.36	0.54	0.48	0.48	0.09	0.09	0.09	0.26	0.26	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	163	1280	573	360	1726	772	145	151	137	456	452	
v/s Ratio Prot	0.02	0.28		c0.22	0.34		0.07	c0.07		0.07	c0.24	
v/s Ratio Perm	0.15		0.41	c0.49		0.03			0.01			
v/c Ratio	0.45	0.79	1.15	1.31	0.71	0.06	0.83	0.83	0.07	0.26	0.92	
Uniform Delay, d1	25.2	34.6	38.6	37.8	24.5	16.5	54.0	54.0	50.4	35.7	43.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.0	5.2	87.5	159.8	2.6	0.1	30.5	30.9	0.2	0.3	24.7	
Delay (s)	27.2	39.8	126.1	197.5	27.1	16.7	84.5	85.0	50.6	36.1	68.3	
Level of Service	C	D	F	F	C	B	F	F	D	D	E	
Approach Delay (s)		78.0			72.2			74.7			61.4	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM Average Control Delay	73.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	120.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		

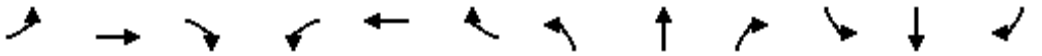
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	375	1576	1420	429	202	783
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	4.0	4.0	3.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	0.88
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3574	1599	1752	2760
Flt Permitted	0.08	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	144	3539	3574	1599	1752	2760
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	426	1791	1614	488	230	890
RTOR Reduction (vph)	0	0	0	249	0	0
Lane Group Flow (vph)	426	1791	1614	239	230	890
Heavy Vehicles (%)	2%	2%	1%	1%	3%	3%
Turn Type	pm+pt			Perm		pm+ov
Protected Phases	5	2	6		4	5
Permitted Phases	2			6		4
Actuated Green, G (s)	72.5	72.5	46.9	46.9	15.5	36.1
Effective Green, g (s)	74.5	74.5	48.9	48.9	17.5	40.1
Actuated g/C Ratio	0.74	0.74	0.49	0.49	0.18	0.40
Clearance Time (s)	5.0	6.0	6.0	6.0	6.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	475	2637	1748	782	307	1107
v/s Ratio Prot	c0.20	0.51	0.45		0.13	c0.18
v/s Ratio Perm	c0.47			0.15		0.14
v/c Ratio	0.90	0.68	0.92	0.31	0.75	0.80
Uniform Delay, d1	30.6	6.6	23.8	15.3	39.2	26.5
Progression Factor	0.95	0.27	0.62	2.56	1.00	1.00
Incremental Delay, d2	10.4	0.7	6.5	0.6	15.4	4.3
Delay (s)	39.4	2.5	21.3	39.9	54.6	30.8
Level of Service	D	A	C	D	D	C
Approach Delay (s)		9.6	25.6		35.7	
Approach LOS		A	C		D	

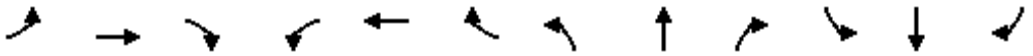
Intersection Summary			
HCM Average Control Delay	21.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	517	1252	0	0	1535	210	361	0	846	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	2.0			
Lane Util. Factor	0.97	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3460	3574			3574	1599	1665	1665	1568			
Flt Permitted	0.07	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	255	3574			3574	1599	1665	1665	1568			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	562	1361	0	0	1668	228	392	0	920	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	105	0	0	0	0	0	0
Lane Group Flow (vph)	562	1361	0	0	1668	123	196	196	920	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	pm+pt					Perm	Perm		Free			
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8		Free			
Actuated Green, G (s)	71.5	71.5			52.1	52.1	16.5	16.5	100.0			
Effective Green, g (s)	72.5	73.5			54.1	54.1	18.5	18.5	100.0			
Actuated g/C Ratio	0.72	0.74			0.54	0.54	0.18	0.18	1.00			
Clearance Time (s)	5.0	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)	678	2627			1934	865	308	308	1568			
v/s Ratio Prot	c0.13	0.38			c0.47							
v/s Ratio Perm	0.47					0.08	0.12	0.12	c0.59			
v/c Ratio	0.83	0.52			0.86	0.14	0.64	0.64	0.59			
Uniform Delay, d1	30.3	5.7			19.7	11.4	37.6	37.6	0.0			
Progression Factor	0.96	1.16			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	6.1	0.5			5.4	0.3	9.7	9.7	1.6			
Delay (s)	35.2	7.1			25.1	11.8	47.3	47.3	1.6			
Level of Service	D	A			C	B	D	D	A			
Approach Delay (s)		15.3			23.5			15.3			0.0	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.2%	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												
Volume (vph)	479	1345	101	330	1657	277	110	323	394	221	275	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1787	3574	1599	1787	3574	1599	1770	3290	
Flt Permitted	0.08	1.00	1.00	0.09	1.00	1.00	0.40	1.00	1.00	0.29	1.00	
Satd. Flow (perm)	155	3539	1583	171	3574	1599	754	3574	1599	532	3290	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	521	1462	110	359	1801	301	120	351	428	240	299	264
RTOR Reduction (vph)	0	0	52	0	0	114	0	0	225	0	161	0
Lane Group Flow (vph)	521	1462	59	359	1801	187	120	351	203	240	402	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	65.0	47.0	47.0	57.0	43.0	43.0	11.0	11.0	11.0	21.0	21.0	
Effective Green, g (s)	67.0	50.0	50.0	59.0	46.0	46.0	13.0	13.0	13.0	20.0	23.0	
Actuated g/C Ratio	0.67	0.50	0.50	0.59	0.46	0.46	0.13	0.13	0.13	0.20	0.23	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	411	1770	792	343	1644	736	98	465	208	181	757	
v/s Ratio Prot	c0.24	0.41		0.16	0.50			0.10		c0.08	0.12	
v/s Ratio Perm	c0.61		0.04	0.46		0.12	0.16		0.13	c0.19		
v/c Ratio	1.27	0.83	0.07	1.05	1.10	0.25	1.22	0.75	0.97	1.33	0.53	
Uniform Delay, d1	32.4	21.3	13.0	30.2	27.0	16.5	43.5	42.0	43.3	39.2	33.8	
Progression Factor	1.00	1.00	1.00	1.23	0.91	0.66	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	138.5	4.6	0.2	47.0	48.5	0.4	163.1	10.9	56.1	179.7	2.7	
Delay (s)	170.9	25.9	13.2	84.1	73.1	11.3	206.6	52.8	99.4	218.9	36.4	
Level of Service	F	C	B	F	E	B	F	D	F	F	D	
Approach Delay (s)		61.3			67.1			95.5			91.0	
Approach LOS		E			E			F			F	

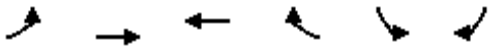
Intersection Summary			
HCM Average Control Delay	72.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	1520	263	276	1154	115	398	261	391	45	118	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1698	1767	1599	1787	1734	
Flt Permitted	0.09	1.00	1.00	0.10	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	177	3574	1599	190	3574	1599	1698	1767	1599	1787	1734	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	293	1551	268	282	1178	117	406	266	399	46	120	131
RTOR Reduction (vph)	0	0	102	0	0	38	0	0	330	0	36	0
Lane Group Flow (vph)	293	1551	166	282	1178	79	329	343	69	46	215	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2			3			
Actuated Green, G (s)	52.6	41.6	41.6	46.6	38.6	38.6	16.5	16.5	16.5	18.6	18.6	
Effective Green, g (s)	54.6	44.6	44.6	48.6	41.6	41.6	19.0	19.0	19.0	21.1	21.1	
Actuated g/C Ratio	0.50	0.41	0.41	0.44	0.38	0.38	0.17	0.17	0.17	0.19	0.19	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	264	1453	650	215	1355	606	294	306	277	344	334	
v/s Ratio Prot	c0.12	0.43		c0.11	0.33		0.19	c0.19		0.03	c0.12	
v/s Ratio Perm	0.43		0.10	c0.47		0.05			0.04			
v/c Ratio	1.11	1.07	0.26	1.31	0.87	0.13	1.12	1.12	0.25	0.13	0.65	
Uniform Delay, d1	32.0	32.6	21.6	28.8	31.5	22.2	45.4	45.4	39.2	36.7	40.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	88.1	43.9	0.9	169.4	7.8	0.4	88.4	88.1	0.5	0.2	4.2	
Delay (s)	120.0	76.5	22.5	198.2	39.3	22.7	133.8	133.4	39.7	36.9	45.1	
Level of Service	F	E	C	F	D	C	F	F	D	D	D	
Approach Delay (s)		75.7			66.5			98.6			43.8	
Approach LOS		E			E			F			D	

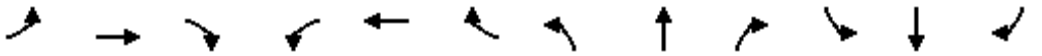
Intersection Summary			
HCM Average Control Delay	75.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	109.7	Sum of lost time (s)	20.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	254	1460	903	692	331	664
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1763	3539	3505	1568	1770	1583
Flt Permitted	0.09	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	169	3539	3505	1568	1770	1583
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	334	1921	1188	911	436	874
RTOR Reduction (vph)	0	0	0	540	0	187
Lane Group Flow (vph)	334	1921	1188	371	436	687
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Bus Blockages (#/hr)	1	0	0	0	0	0
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	59.0	59.0	39.0	39.0	44.0	44.0
Effective Green, g (s)	61.0	61.0	41.0	41.0	46.0	46.0
Actuated g/C Ratio	0.53	0.53	0.36	0.36	0.40	0.40
Clearance Time (s)	5.0	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)	325	1877	1250	559	708	633
v/s Ratio Prot	0.15	c0.54	0.34		0.25	
v/s Ratio Perm	c0.39			0.24		c0.43
v/c Ratio	1.03	1.02	0.95	0.66	0.62	1.09
Uniform Delay, d1	36.0	27.0	36.0	31.2	27.5	34.5
Progression Factor	0.87	0.67	0.52	5.29	1.00	1.00
Incremental Delay, d2	35.9	18.4	2.3	0.6	4.0	61.3
Delay (s)	67.2	36.4	20.9	165.6	31.4	95.8
Level of Service	E	D	C	F	C	F
Approach Delay (s)		40.9	83.7		74.4	
Approach LOS		D	F		E	

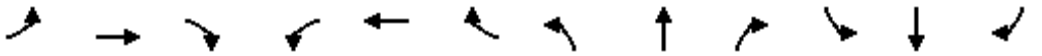
Intersection Summary			
HCM Average Control Delay	64.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	540	1100	0	0	1378	85	173	0	541	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	2.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3539	1583		1671	1495			
Flt Permitted	0.07	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	134	3574			3539	1583		1671	1495			
Peak-hour factor, PHF	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Adj. Flow (vph)	711	1447	0	0	1813	112	228	0	712	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	54	0	0	0	0	0	0
Lane Group Flow (vph)	711	1447	0	0	1813	58	0	228	712	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	8%	8%	8%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Free			
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8		Free			
Actuated Green, G (s)	89.0	89.0			51.0	51.0		14.0	115.0			
Effective Green, g (s)	90.0	91.0			53.0	53.0		16.0	115.0			
Actuated g/C Ratio	0.78	0.79			0.46	0.46		0.14	1.00			
Clearance Time (s)	5.0	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)	594	2828			1631	730		232	1495			
v/s Ratio Prot	c0.35	0.40			0.51							
v/s Ratio Perm	c0.58					0.04		0.14	0.48			
v/c Ratio	1.20	0.51			1.11	0.08		0.98	0.48			
Uniform Delay, d1	35.7	4.2			31.0	17.3		49.4	0.0			
Progression Factor	0.56	2.12			0.64	0.24		1.00	1.00			
Incremental Delay, d2	90.3	0.2			57.8	0.2		54.8	1.1			
Delay (s)	110.4	9.2			77.5	4.3		104.2	1.1			
Level of Service	F	A			E	A		F	A			
Approach Delay (s)		42.5			73.3			26.1			0.0	
Approach LOS		D			E			C			A	

Intersection Summary			
HCM Average Control Delay	51.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

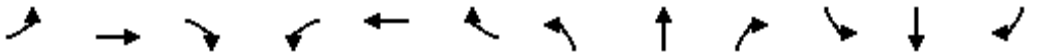
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	221	1239	47	255	1043	314	30	59	77	344	273	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583	1719	1810	1538	1770	1715	
Flt Permitted	0.09	1.00	1.00	0.09	1.00	1.00	0.27	1.00	1.00	0.51	1.00	
Satd. Flow (perm)	167	3574	1599	162	3539	1583	492	1810	1538	947	1715	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	283	1588	60	327	1337	403	38	76	99	441	350	390
RTOR Reduction (vph)	0	0	22	0	0	179	0	0	86	0	35	0
Lane Group Flow (vph)	283	1588	38	327	1337	224	38	76	13	441	705	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	5%	5%	5%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	56.0	44.0	44.0	58.0	45.0	45.0	12.7	12.7	12.7	40.0	40.0	
Effective Green, g (s)	58.0	47.0	47.0	60.0	48.0	48.0	14.7	14.7	14.7	39.0	42.0	
Actuated g/C Ratio	0.50	0.41	0.41	0.52	0.42	0.42	0.13	0.13	0.13	0.34	0.37	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	267	1461	654	280	1477	661	63	231	197	488	626	
v/s Ratio Prot	0.12	0.44		c0.14	0.38			0.04		0.18	c0.41	
v/s Ratio Perm	0.41		0.02	c0.47		0.14	0.08		0.01	0.12		
v/c Ratio	1.06	1.09	0.06	1.17	0.91	0.34	0.60	0.33	0.06	0.90	1.13	
Uniform Delay, d1	34.6	34.0	20.6	35.7	31.4	22.7	47.4	45.7	44.1	33.9	36.5	
Progression Factor	1.00	1.00	1.00	1.13	0.82	0.63	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	71.8	50.9	0.2	84.7	2.5	0.3	36.1	3.8	0.6	19.9	76.0	
Delay (s)	106.3	84.9	20.8	125.0	28.2	14.7	83.5	49.4	44.7	53.9	112.5	
Level of Service	F	F	C	F	C	B	F	D	D	D	F	
Approach Delay (s)		86.1			40.9			53.3			90.6	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM Average Control Delay	68.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.4%	ICU Level of Service	F
Analysis Period (min)	15		

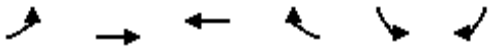
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	64	875	762	407	1060	56	131	81	89	102	228	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1665	1730	1568	1787	1770	
Flt Permitted	0.12	1.00	1.00	0.10	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	231	3574	1599	184	3574	1599	1665	1730	1568	1787	1770	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	74	1017	886	473	1233	65	152	94	103	119	265	173
RTOR Reduction (vph)	0	0	246	0	0	21	0	0	94	0	21	0
Lane Group Flow (vph)	74	1017	640	473	1233	44	120	126	9	119	417	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2			3			
Actuated Green, G (s)	40.0	36.0	36.0	59.0	50.0	50.0	8.0	8.0	8.0	28.0	28.0	
Effective Green, g (s)	42.0	39.0	39.0	60.0	53.0	53.0	10.5	10.5	10.5	30.5	30.5	
Actuated g/C Ratio	0.37	0.34	0.34	0.52	0.46	0.46	0.09	0.09	0.09	0.27	0.27	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	152	1212	542	361	1647	737	152	158	143	474	469	
v/s Ratio Prot	0.02	0.28		c0.22	0.34		0.07	c0.07		0.07	c0.24	
v/s Ratio Perm	0.16		0.40	c0.47		0.03			0.01			
v/c Ratio	0.49	0.84	1.18	1.31	0.75	0.06	0.79	0.80	0.07	0.25	0.89	
Uniform Delay, d1	25.7	35.1	38.0	35.5	25.5	17.2	51.2	51.2	47.8	33.3	40.6	
Progression Factor	0.82	0.73	0.49	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.2	6.3	97.4	158.2	3.2	0.2	23.2	23.7	0.2	0.3	18.6	
Delay (s)	23.1	31.8	116.2	193.7	28.7	17.3	74.4	74.9	48.0	33.5	59.2	
Level of Service	C	C	F	F	C	B	E	E	D	C	E	
Approach Delay (s)		69.3			72.3			66.8			53.7	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM Average Control Delay	68.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.8%	ICU Level of Service	G
Analysis Period (min)	15		

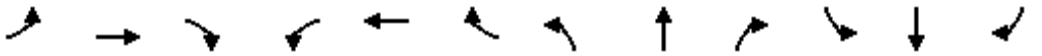
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	375	1576	1420	429	202	783
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3574	1599	1752	1568
Flt Permitted	0.08	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	152	3539	3574	1599	1752	1568
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	426	1791	1614	488	230	890
RTOR Reduction (vph)	0	0	0	270	0	192
Lane Group Flow (vph)	426	1791	1614	218	230	698
Heavy Vehicles (%)	2%	2%	1%	1%	3%	3%
Turn Type	pm+pt			Perm		Perm
Protected Phases	5	2	6		4	
Permitted Phases	2			6		4
Actuated Green, G (s)	65.0	65.0	44.0	44.0	38.0	38.0
Effective Green, g (s)	67.0	67.0	46.0	46.0	40.0	40.0
Actuated g/C Ratio	0.58	0.58	0.40	0.40	0.35	0.35
Clearance Time (s)	5.0	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)	342	2062	1430	640	609	545
v/s Ratio Prot	c0.20	0.51	0.45		0.13	
v/s Ratio Perm	c0.53			0.14		c0.45
v/c Ratio	1.25	0.87	1.13	0.34	0.38	1.28
Uniform Delay, d1	37.3	20.3	34.5	24.0	28.2	37.5
Progression Factor	0.96	0.66	0.61	0.12	1.00	1.00
Incremental Delay, d2	119.8	2.1	58.9	0.1	1.8	140.1
Delay (s)	155.5	15.4	79.8	3.1	29.9	177.6
Level of Service	F	B	E	A	C	F
Approach Delay (s)		42.3	62.0		147.3	
Approach LOS		D	E		F	

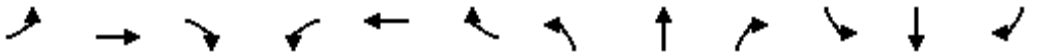
Intersection Summary			
HCM Average Control Delay	71.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	517	1252	0	0	1535	210	361	0	846	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	2.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1780	3574			3574	1599		1752	1568			
Flt Permitted	0.07	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	139	3574			3574	1599		1752	1568			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	562	1361	0	0	1668	228	392	0	920	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	119	0	0	0	0	0	0
Lane Group Flow (vph)	562	1361	0	0	1668	109	0	392	920	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	pm+pt					Perm	Perm		Free			
Protected Phases	5	2			6			8				
Permitted Phases	2					6	8		Free			
Actuated Green, G (s)	81.0	81.0			49.0	49.0		22.0	115.0			
Effective Green, g (s)	82.0	83.0			51.0	51.0		24.0	115.0			
Actuated g/C Ratio	0.71	0.72			0.44	0.44		0.21	1.00			
Clearance Time (s)	5.0	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)	499	2579			1585	709		366	1568			
v/s Ratio Prot	c0.27	0.38			0.47							
v/s Ratio Perm	c0.53					0.07		0.22	0.59			
v/c Ratio	1.13	0.53			1.05	0.15		1.07	0.59			
Uniform Delay, d1	37.1	7.2			32.0	19.1		45.5	0.0			
Progression Factor	1.30	1.50			0.64	0.75		1.00	1.00			
Incremental Delay, d2	69.5	0.5			30.9	0.2		67.2	1.6			
Delay (s)	117.6	11.3			51.6	14.6		112.7	1.6			
Level of Service	F	B			D	B		F	A			
Approach Delay (s)		42.3			47.1			34.8			0.0	
Approach LOS		D			D			C			A	

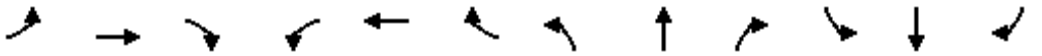
Intersection Summary			
HCM Average Control Delay	42.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	479	1345	101	330	1657	277	110	323	394	221	275	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1787	3574	1599	1787	1881	1599	1770	1732	
Flt Permitted	0.09	1.00	1.00	0.09	1.00	1.00	0.14	1.00	1.00	0.17	1.00	
Satd. Flow (perm)	159	3539	1583	171	3574	1599	259	1881	1599	313	1732	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	521	1462	110	359	1801	301	120	351	428	240	299	264
RTOR Reduction (vph)	0	0	45	0	0	100	0	0	187	0	28	0
Lane Group Flow (vph)	521	1462	65	359	1801	201	120	351	241	240	535	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	63.0	46.0	46.0	57.0	43.0	43.0	27.0	27.0	27.0	37.0	37.0	
Effective Green, g (s)	65.0	49.0	49.0	59.0	46.0	46.0	29.0	29.0	29.0	36.0	39.0	
Actuated g/C Ratio	0.57	0.43	0.43	0.51	0.40	0.40	0.25	0.25	0.25	0.31	0.34	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.0	6.0	6.0	3.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	342	1508	674	299	1430	640	65	474	403	174	587	
v/s Ratio Prot	c0.24	0.41		0.16	0.50			0.19		c0.07	0.31	
v/s Ratio Perm	c0.62		0.04	0.46		0.13	c0.46		0.15	0.36		
v/c Ratio	1.52	0.97	0.10	1.20	1.26	0.31	1.85	0.74	0.60	1.38	0.91	
Uniform Delay, d1	36.9	32.3	19.8	35.7	34.5	23.7	43.0	39.5	37.9	37.8	36.4	
Progression Factor	1.00	1.00	1.00	1.12	0.83	0.60	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	250.0	17.0	0.3	93.4	117.3	0.1	433.8	10.0	6.4	202.4	20.8	
Delay (s)	286.9	49.2	20.0	133.3	145.9	14.4	476.8	49.5	44.3	240.2	57.2	
Level of Service	F	D	C	F	F	B	F	D	D	F	E	
Approach Delay (s)		106.9			128.0			104.1			111.9	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	115.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	123.3%	ICU Level of Service	H
Analysis Period (min)	15		

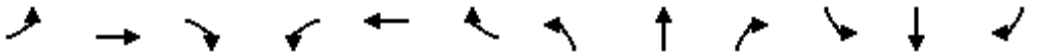
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	1520	263	276	1154	115	398	261	391	45	118	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1698	1767	1599	1787	1734	
Flt Permitted	0.10	1.00	1.00	0.11	1.00	1.00	0.95	0.99	1.00	0.95	1.00	
Satd. Flow (perm)	191	3574	1599	201	3574	1599	1698	1767	1599	1787	1734	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	293	1551	268	282	1178	117	406	266	399	46	120	131
RTOR Reduction (vph)	0	0	113	0	0	41	0	0	337	0	38	0
Lane Group Flow (vph)	293	1551	155	282	1178	76	329	343	62	46	213	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2			3			
Actuated Green, G (s)	57.4	38.5	38.5	53.4	36.5	36.5	15.5	15.5	15.5	19.1	19.1	
Effective Green, g (s)	59.4	41.5	41.5	55.4	39.5	39.5	18.0	18.0	18.0	21.6	21.6	
Actuated g/C Ratio	0.52	0.36	0.36	0.48	0.34	0.34	0.16	0.16	0.16	0.19	0.19	
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0	6.5	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	375	1290	577	344	1228	549	266	277	250	336	326	
v/s Ratio Prot	c0.14	c0.43		0.13	0.33		0.19	c0.19		0.03	c0.12	
v/s Ratio Perm	0.27		0.10	0.27		0.05			0.04			
v/c Ratio	0.78	1.20	0.27	0.82	0.96	0.14	1.24	1.24	0.25	0.14	0.65	
Uniform Delay, d1	30.6	36.8	26.0	30.7	37.0	26.0	48.5	48.5	42.6	38.9	43.2	
Progression Factor	1.10	0.84	0.96	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.7	97.6	1.0	14.1	17.6	0.5	134.6	134.2	0.5	0.2	4.6	
Delay (s)	42.3	128.4	26.0	44.8	54.6	26.5	183.1	182.7	43.1	39.1	47.9	
Level of Service	D	F	C	D	D	C	F	F	D	D	D	
Approach Delay (s)		103.4			50.8			130.8			46.5	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM Average Control Delay	89.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

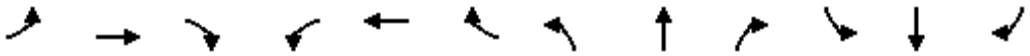
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	625	60	215	305	0	0	0	0	395	0	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.27	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	511	3574					1698	1698	1599
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	710	68	244	347	0	0	0	0	449	0	318
RTOR Reduction (vph)	0	0	48	0	0	0	0	0	0	0	0	250
Lane Group Flow (vph)	0	710	20	244	347	0	0	0	0	224	225	68
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 6	5 6 16						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		25.0	25.0	54.7	60.7					17.3	17.3	17.3
Effective Green, g (s)		27.0	27.0	54.7	54.7					19.3	19.3	19.3
Actuated g/C Ratio		0.30	0.30	0.61	0.61					0.21	0.21	0.21
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)		1541	480	732	2172					364	364	343
v/s Ratio Prot		c0.14		c0.11	0.10							
v/s Ratio Perm			0.01	0.09						0.13	0.13	0.04
v/c Ratio		0.46	0.04	0.33	0.16					0.62	0.62	0.20
Uniform Delay, d1		25.6	22.3	14.2	7.7					32.0	32.0	29.0
Progression Factor		1.00	1.00	0.72	0.05					1.00	1.00	1.00
Incremental Delay, d2		0.2	0.0	0.2	0.0					3.1	3.1	0.3
Delay (s)		25.8	22.4	10.5	0.5					35.1	35.1	29.3
Level of Service		C	C	B	A					D	D	C
Approach Delay (s)		25.5			4.6			0.0			32.7	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

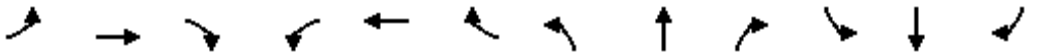
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	295	725	0	0	485	465	35	0	180	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1736	1553			
Flt Permitted	0.29	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	543	3539			3539	1583		1736	1553			
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	360	884	0	0	591	567	43	0	220	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	391	0	0	181	0	0	0
Lane Group Flow (vph)	360	884	0	0	591	176	0	43	39	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1 4	1 2 4			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	55.6	67.6			26.0	26.0		12.4	12.4			
Effective Green, g (s)	61.6	69.6			28.0	28.0		14.4	14.4			
Actuated g/C Ratio	0.68	0.77			0.31	0.31		0.16	0.16			
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)	830	2737			1101	492		278	248			
v/s Ratio Prot	c0.16	c0.25			c0.17							
v/s Ratio Perm	0.13					0.11		0.02	c0.03			
v/c Ratio	0.43	0.32			0.54	0.36		0.15	0.16			
Uniform Delay, d1	6.4	3.1			25.6	24.0		32.6	32.6			
Progression Factor	1.66	0.09			1.39	5.25		1.00	1.00			
Incremental Delay, d2	0.3	0.1			0.4	0.3		0.3	0.3			
Delay (s)	11.0	0.3			35.9	126.4		32.8	32.9			
Level of Service	B	A			D	F		C	C			
Approach Delay (s)		3.4			80.2			32.9			0.0	
Approach LOS		A			F			C			A	

Intersection Summary			
HCM Average Control Delay	39.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

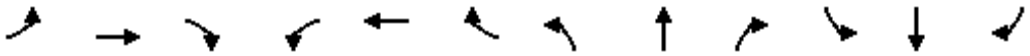
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	570	190	140	695	90	150	120	175	70	125	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3513		1787	1881	1599	1770	3539	1583
Flt Permitted	0.17	1.00	1.00	0.20	1.00		0.61	1.00	1.00	0.67	1.00	1.00
Satd. Flow (perm)	319	3574	1599	375	3513		1139	1881	1599	1240	3539	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	173	679	226	167	827	107	179	143	208	83	149	125
RTOR Reduction (vph)	0	0	159	0	11	0	0	0	137	0	0	85
Lane Group Flow (vph)	173	679	67	167	923	0	179	143	71	83	149	40
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	34.5	24.6	24.6	34.3	24.5		39.8	28.8	28.8	35.4	26.6	26.6
Effective Green, g (s)	32.5	26.6	26.6	32.3	26.5		37.8	30.8	30.8	33.4	28.6	28.6
Actuated g/C Ratio	0.36	0.30	0.30	0.36	0.29		0.42	0.34	0.34	0.37	0.32	0.32
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	260	1056	473	273	1034		550	644	547	506	1125	503
v/s Ratio Prot	c0.07	0.19		0.06	c0.26		c0.04	0.08		0.01	0.04	
v/s Ratio Perm	0.17		0.04	0.16			c0.10		0.04	0.05		0.03
v/c Ratio	0.67	0.64	0.14	0.61	0.89		0.33	0.22	0.13	0.16	0.13	0.08
Uniform Delay, d1	22.7	27.6	23.3	21.4	30.4		16.9	21.1	20.4	18.7	21.9	21.5
Progression Factor	1.53	1.20	2.76	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	2.9	0.6	4.0	11.6		0.3	0.8	0.5	0.2	0.1	0.1
Delay (s)	40.6	35.9	65.0	25.4	42.0		17.2	21.9	20.9	18.8	21.9	21.6
Level of Service	D	D	E	C	D		B	C	C	B	C	C
Approach Delay (s)		42.8			39.5			19.9			21.1	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

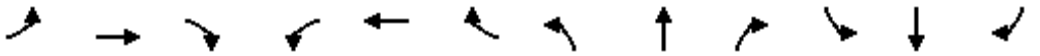
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	510	0	65	410	115	5	10	75	100	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505		1770	3539	1583		1852	1599	1736	1690	
Flt Permitted	0.49	1.00		0.32	1.00	1.00		0.95	1.00	0.62	1.00	
Satd. Flow (perm)	907	3505		605	3539	1583		1793	1599	1140	1690	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	16	560	0	71	451	126	5	11	82	110	11	11
RTOR Reduction (vph)	0	0	0	0	0	71	0	0	59	0	7	0
Lane Group Flow (vph)	16	560	0	71	451	55	0	16	23	110	15	0
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	1%	1%	1%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	29.3	28.2		36.1	31.6	31.6		20.3	20.3	28.8	28.8	
Effective Green, g (s)	31.3	30.2		38.1	33.6	33.6		21.3	21.3	28.8	29.8	
Actuated g/C Ratio	0.40	0.39		0.49	0.43	0.43		0.27	0.27	0.37	0.38	
Clearance Time (s)	5.0	6.0		5.0	6.0	6.0		5.0	5.0	4.0	5.0	
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)	389	1366		380	1534	686		493	439	458	650	
v/s Ratio Prot	0.00	c0.16		c0.01	0.13					c0.01	0.01	
v/s Ratio Perm	0.02			0.08		0.03		0.01	0.01	c0.08		
v/c Ratio	0.04	0.41		0.19	0.29	0.08		0.03	0.05	0.24	0.02	
Uniform Delay, d1	13.9	17.2		11.0	14.2	12.9		20.6	20.7	16.4	14.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.2		0.2	0.1	0.0		0.0	0.2	0.3	0.1	
Delay (s)	13.9	17.4		11.2	14.4	12.9		20.6	20.9	16.7	14.9	
Level of Service	B	B		B	B	B		C	C	B	B	
Approach Delay (s)		17.3			13.7			20.8			16.4	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	77.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

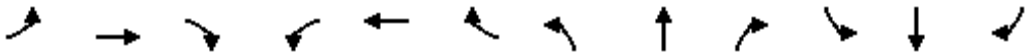
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	680	125	335	675	0	0	0	0	490	0	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.21	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	390	3574					1698	1698	1599
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	840	154	414	833	0	0	0	0	605	0	457
RTOR Reduction (vph)	0	0	108	0	0	0	0	0	0	0	0	157
Lane Group Flow (vph)	0	840	46	414	833	0	0	0	0	302	303	300
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 6	5 6 16						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		25.0	25.0	52.4	58.4					19.6	19.6	19.6
Effective Green, g (s)		27.0	27.0	52.4	52.4					21.6	21.6	21.6
Actuated g/C Ratio		0.30	0.30	0.58	0.58					0.24	0.24	0.24
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)		1541	480	652	2081					408	408	384
v/s Ratio Prot		0.16		c0.19	0.23							
v/s Ratio Perm			0.03	c0.18						0.18	0.18	c0.19
v/c Ratio		0.55	0.10	0.63	0.40					0.74	0.74	0.78
Uniform Delay, d1		26.4	22.7	18.8	10.2					31.6	31.6	32.0
Progression Factor		1.00	1.00	0.75	0.50					1.00	1.00	1.00
Incremental Delay, d2		0.4	0.1	1.6	0.1					7.1	7.1	9.9
Delay (s)		26.8	22.8	15.6	5.2					38.7	38.8	41.9
Level of Service		C	C	B	A					D	D	D
Approach Delay (s)		26.1			8.7			0.0			40.1	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	24.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

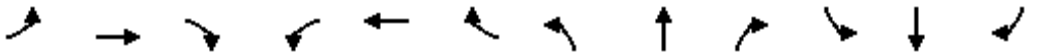
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	305	865	0	0	865	635	145	0	210	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3574	1599		1752	1568			
Flt Permitted	0.14	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	261	3574			3574	1599		1752	1568			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	321	911	0	0	911	668	153	0	221	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	388	0	0	179	0	0	0
Lane Group Flow (vph)	321	911	0	0	911	280	0	153	42	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1 4	1 2 4			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	55.0	67.0			26.8	26.8		13.0	13.0			
Effective Green, g (s)	61.0	69.0			28.8	28.8		15.0	15.0			
Actuated g/C Ratio	0.68	0.77			0.32	0.32		0.17	0.17			
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)	723	2740			1144	512		292	261			
v/s Ratio Prot	c0.16	c0.25			c0.25							
v/s Ratio Perm	0.14					0.18		0.09	0.03			
v/c Ratio	0.44	0.33			0.80	0.55		0.52	0.16			
Uniform Delay, d1	11.1	3.3			27.9	25.2		34.2	32.1			
Progression Factor	1.64	0.00			0.58	0.49		1.00	1.00			
Incremental Delay, d2	0.3	0.1			2.4	0.7		1.7	0.3			
Delay (s)	18.4	0.1			18.6	13.2		35.9	32.4			
Level of Service	B	A			B	B		D	C			
Approach Delay (s)		4.8			16.3			33.8			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

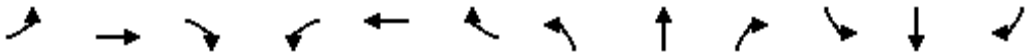
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	265	630	185	125	965	90	285	160	85	160	170	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3528		1787	1881	1599	1787	3574	1599
Flt Permitted	0.14	1.00	1.00	0.29	1.00		0.64	1.00	1.00	0.58	1.00	1.00
Satd. Flow (perm)	272	3574	1599	543	3528		1206	1881	1599	1097	3574	1599
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	273	649	191	129	995	93	294	165	88	165	175	263
RTOR Reduction (vph)	0	0	126	0	8	0	0	0	63	0	0	187
Lane Group Flow (vph)	273	649	65	129	1080	0	294	165	25	165	175	76
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	39.7	28.7	28.7	34.3	26.0		35.0	24.0	24.0	35.0	24.0	24.0
Effective Green, g (s)	37.7	30.7	30.7	32.3	28.0		33.0	26.0	26.0	33.0	26.0	26.0
Actuated g/C Ratio	0.42	0.34	0.34	0.36	0.31		0.37	0.29	0.29	0.37	0.29	0.29
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	282	1219	545	296	1098		507	543	462	479	1032	462
v/s Ratio Prot	c0.11	0.18		0.04	c0.31		c0.06	0.09		0.04	0.05	
v/s Ratio Perm	0.30		0.04	0.12			c0.15		0.02	0.09		0.05
v/c Ratio	0.97	0.53	0.12	0.44	0.98		0.58	0.30	0.06	0.34	0.17	0.16
Uniform Delay, d1	21.7	23.9	20.4	20.3	30.8		21.6	24.9	23.1	19.9	23.9	23.9
Progression Factor	1.72	1.29	3.11	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	42.9	1.6	0.4	1.0	23.6		1.6	1.4	0.2	0.4	0.1	0.2
Delay (s)	80.2	32.5	63.8	21.3	54.4		23.2	26.4	23.3	20.4	24.0	24.1
Level of Service	F	C	E	C	D		C	C	C	C	C	C
Approach Delay (s)		49.6			50.9			24.2			23.0	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	41.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

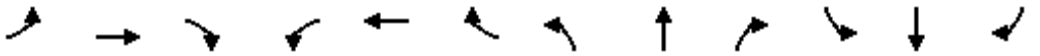
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	460	25	35	830	180	20	15	145	195	10	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1703	3406	1524		1828	1599	1787	1681	
Flt Permitted	0.18	1.00	1.00	0.35	1.00	1.00		0.88	1.00	0.63	1.00	
Satd. Flow (perm)	342	3574	1599	635	3406	1524		1652	1599	1182	1681	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	16	505	27	38	912	198	22	16	159	214	11	27
RTOR Reduction (vph)	0	0	17	0	0	121	0	0	110	0	15	0
Lane Group Flow (vph)	16	505	10	38	912	77	0	38	49	214	23	0
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	28.7	27.6	27.6	33.3	29.9	29.9		24.2	24.2	35.2	35.2	
Effective Green, g (s)	30.7	29.6	29.6	35.3	31.9	31.9		25.2	25.2	35.2	36.2	
Actuated g/C Ratio	0.37	0.36	0.36	0.43	0.39	0.39		0.31	0.31	0.43	0.44	
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0		5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	165	1287	576	330	1322	591		506	490	558	740	
v/s Ratio Prot	0.00	0.14		c0.01	c0.27					c0.03	0.01	
v/s Ratio Perm	0.03		0.01	0.04		0.05		0.02	0.03	c0.13		
v/c Ratio	0.10	0.39	0.02	0.12	0.69	0.13		0.08	0.10	0.38	0.03	
Uniform Delay, d1	17.2	19.6	16.9	14.0	21.0	16.2		20.2	20.4	15.4	13.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.2	0.0	0.2	1.5	0.1		0.1	0.4	0.4	0.1	
Delay (s)	17.4	19.8	16.9	14.2	22.5	16.3		20.3	20.8	15.8	13.1	
Level of Service	B	B	B	B	C	B		C	C	B	B	
Approach Delay (s)		19.6			21.2			20.7			15.4	
Approach LOS		B			C			C			B	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	82.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

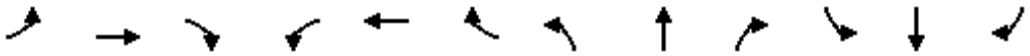
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	721	77	280	353	0	0	0	0	400	0	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.22	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	418	3574					1698	1698	1599
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	819	88	318	401	0	0	0	0	455	0	366
RTOR Reduction (vph)	0	0	60	0	0	0	0	0	0	0	0	275
Lane Group Flow (vph)	0	819	28	318	401	0	0	0	0	227	228	91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 6	5 6 16						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		33.3	33.3	62.8	72.8					25.2	25.2	25.2
Effective Green, g (s)		35.3	35.3	62.8	66.8					27.2	27.2	27.2
Actuated g/C Ratio		0.32	0.32	0.57	0.61					0.25	0.25	0.25
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)		1648	513	606	2170					420	420	395
v/s Ratio Prot		c0.16		c0.14	0.11							
v/s Ratio Perm			0.02	c0.16						0.13	0.13	0.06
v/c Ratio		0.50	0.06	0.52	0.18					0.54	0.54	0.23
Uniform Delay, d1		30.2	25.8	13.4	9.6					36.0	36.0	33.0
Progression Factor		1.00	1.00	1.96	0.33					1.00	1.00	1.00
Incremental Delay, d2		0.2	0.0	0.6	0.0					1.4	1.4	0.3
Delay (s)		30.4	25.9	27.0	3.1					37.4	37.4	33.3
Level of Service		C	C	C	A					D	D	C
Approach Delay (s)		30.0			13.7			0.0			35.6	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

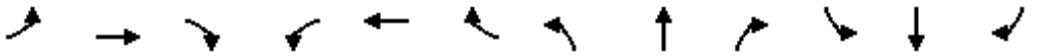
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	383	836	0	0	687	535	87	0	254	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1736	1553			
Flt Permitted	0.17	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	315	3539			3539	1583		1736	1553			
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	467	1020	0	0	838	652	106	0	310	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	335	0	0	133	0	0	0
Lane Group Flow (vph)	467	1020	0	0	838	317	0	106	177	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1 4	1 2 4			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	68.6	80.6			36.6	36.6		19.4	19.4			
Effective Green, g (s)	74.6	82.6			38.6	38.6		21.4	21.4			
Actuated g/C Ratio	0.68	0.75			0.35	0.35		0.19	0.19			
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)	690	2657			1242	555		338	302			
v/s Ratio Prot	c0.22	0.29			0.24							
v/s Ratio Perm	c0.24					0.20		0.06	c0.11			
v/c Ratio	0.68	0.38			0.67	0.57		0.31	0.59			
Uniform Delay, d1	17.9	4.8			30.4	29.0		38.0	40.3			
Progression Factor	1.05	0.63			0.63	0.43		1.00	1.00			
Incremental Delay, d2	2.5	0.1			1.2	1.2		0.5	2.9			
Delay (s)	21.3	3.1			20.3	13.6		38.5	43.2			
Level of Service	C	A			C	B		D	D			
Approach Delay (s)		8.8			17.3			42.0			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

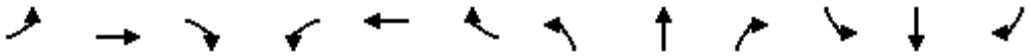
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	154	801	220	154	800	101	174	142	200	123	201	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3514		1787	1881	1599	1770	3539	1583
Flt Permitted	0.12	1.00	1.00	0.17	1.00		0.54	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	218	3574	1599	318	3514		1021	1881	1599	964	3539	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	183	954	262	183	952	120	207	169	238	146	239	143
RTOR Reduction (vph)	0	0	148	0	9	0	0	0	182	0	0	109
Lane Group Flow (vph)	183	954	114	183	1063	0	207	169	56	146	239	34
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	57.7	45.9	45.9	56.3	45.2		35.0	24.0	24.0	35.0	24.0	24.0
Effective Green, g (s)	55.7	47.9	47.9	54.3	47.2		33.0	26.0	26.0	33.0	26.0	26.0
Actuated g/C Ratio	0.51	0.44	0.44	0.49	0.43		0.30	0.24	0.24	0.30	0.24	0.24
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	264	1556	696	292	1508		376	445	378	362	836	374
v/s Ratio Prot	c0.07	0.27		0.06	c0.30		c0.05	0.09		0.04	0.07	
v/s Ratio Perm	0.28		0.07	0.25			c0.12		0.04	0.08		0.02
v/c Ratio	0.69	0.61	0.16	0.63	0.71		0.55	0.38	0.15	0.40	0.29	0.09
Uniform Delay, d1	19.5	23.9	18.9	18.2	25.7		30.5	35.2	33.2	29.5	34.4	32.8
Progression Factor	1.12	0.89	2.05	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.0	1.7	0.5	4.2	2.8		1.7	2.5	0.8	0.7	0.2	0.1
Delay (s)	28.9	23.0	39.2	22.4	28.5		32.3	37.7	34.1	30.2	34.6	32.9
Level of Service	C	C	D	C	C		C	D	C	C	C	C
Approach Delay (s)		26.8			27.6			34.5			32.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

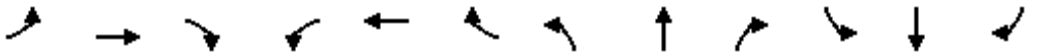
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	656	2	82	467	133	8	9	89	117	14	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1568	1770	3539	1583		1838	1599	1736	1700	
Flt Permitted	0.44	1.00	1.00	0.24	1.00	1.00		0.92	1.00	0.62	1.00	
Satd. Flow (perm)	805	3505	1568	456	3539	1583		1731	1599	1137	1700	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	20	721	2	90	513	146	9	10	98	129	15	13
RTOR Reduction (vph)	0	0	1	0	0	85	0	0	71	0	8	0
Lane Group Flow (vph)	20	721	1	90	513	61	0	19	27	129	20	0
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	1%	1%	1%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	30.0	27.8	27.8	34.6	30.1	30.1		20.3	20.3	28.8	28.8	
Effective Green, g (s)	32.0	29.8	29.8	36.6	32.1	32.1		21.3	21.3	28.8	29.8	
Actuated g/C Ratio	0.42	0.39	0.39	0.47	0.42	0.42		0.28	0.28	0.37	0.39	
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0		5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	373	1355	606	310	1473	659		478	442	460	657	
v/s Ratio Prot	0.00	c0.21		c0.02	0.14					c0.02	0.01	
v/s Ratio Perm	0.02		0.00	0.12		0.04		0.01	0.02	c0.09		
v/c Ratio	0.05	0.53	0.00	0.29	0.35	0.09		0.04	0.06	0.28	0.03	
Uniform Delay, d1	13.4	18.3	14.5	12.1	15.4	13.7		20.4	20.5	16.5	14.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.4	0.0	0.5	0.1	0.1		0.0	0.3	0.3	0.1	
Delay (s)	13.4	18.7	14.5	12.6	15.5	13.7		20.5	20.8	16.8	14.8	
Level of Service	B	B	B	B	B	B		C	C	B	B	
Approach Delay (s)		18.5			14.8			20.7			16.4	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	77.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

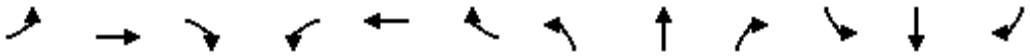
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	877	143	351	998	0	0	0	0	562	0	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.15	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	286	3574					1698	1698	1599
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	1083	177	433	1232	0	0	0	0	694	0	522
RTOR Reduction (vph)	0	0	131	0	0	0	0	0	0	0	0	53
Lane Group Flow (vph)	0	1083	46	433	1232	0	0	0	0	347	347	469
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 6	5 6 16						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		26.3	26.3	62.1	66.1					31.9	31.9	31.9
Effective Green, g (s)		28.3	28.3	56.1	60.1					33.9	33.9	33.9
Actuated g/C Ratio		0.26	0.26	0.51	0.55					0.31	0.31	0.31
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)		1321	411	552	1953					523	523	493
v/s Ratio Prot		c0.21		c0.21	0.34							
v/s Ratio Perm			0.03	0.19						0.20	0.20	c0.29
v/c Ratio		0.82	0.11	0.78	0.63					0.66	0.66	0.95
Uniform Delay, d1		38.5	31.2	25.9	17.3					33.1	33.1	37.2
Progression Factor		1.00	1.00	1.52	0.13					1.00	1.00	1.00
Incremental Delay, d2		4.1	0.1	4.8	0.4					3.2	3.2	28.4
Delay (s)		42.6	31.4	44.2	2.7					36.3	36.3	65.7
Level of Service		D	C	D	A					D	D	E
Approach Delay (s)		41.0			13.5			0.0			48.9	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

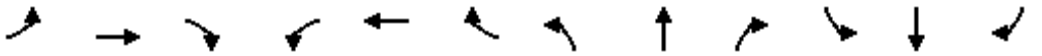
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	386	994	0	0	1033	733	299	0	286	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3574	1599		1752	1568			
Flt Permitted	0.11	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	209	3574			3574	1599		1752	1568			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	406	1046	0	0	1087	772	315	0	301	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	392	0	0	111	0	0	0
Lane Group Flow (vph)	406	1046	0	0	1087	380	0	315	190	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1 4	1 2 4			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	66.0	72.0			34.0	34.0		26.0	26.0			
Effective Green, g (s)	68.0	72.0			36.0	36.0		28.0	28.0			
Actuated g/C Ratio	0.62	0.65			0.33	0.33		0.25	0.25			
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)	588	2339			1170	523		446	399			
v/s Ratio Prot	c0.20	0.29			c0.30							
v/s Ratio Perm	0.23					0.24		0.18	0.12			
v/c Ratio	0.69	0.45			0.93	0.73		0.71	0.48			
Uniform Delay, d1	30.4	9.3			35.8	32.7		37.3	34.8			
Progression Factor	0.57	0.91			0.70	0.38		1.00	1.00			
Incremental Delay, d2	2.2	0.1			9.2	3.4		5.0	0.9			
Delay (s)	19.6	8.5			34.2	15.8		42.3	35.7			
Level of Service	B	A			C	B		D	D			
Approach Delay (s)		11.6			26.5			39.1			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

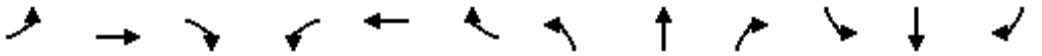
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	302	743	210	141	1001	102	325	194	118	186	195	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3525		1787	1881	1599	1787	3574	1599
Flt Permitted	0.14	1.00	1.00	0.36	1.00		0.57	1.00	1.00	0.48	1.00	1.00
Satd. Flow (perm)	263	3574	1599	680	3525		1067	1881	1599	911	3574	1599
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	311	766	216	145	1032	105	335	200	122	192	201	347
RTOR Reduction (vph)	0	0	122	0	7	0	0	0	80	0	0	265
Lane Group Flow (vph)	311	766	94	145	1130	0	335	200	42	192	201	82
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	46.0	46.0	46.0	41.6	38.6		37.0	25.0	25.0	35.0	24.0	24.0
Effective Green, g (s)	45.0	48.0	48.0	40.6	40.6		35.0	27.0	27.0	33.0	26.0	26.0
Actuated g/C Ratio	0.41	0.44	0.44	0.37	0.37		0.32	0.25	0.25	0.30	0.24	0.24
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	335	1560	698	342	1301		412	462	392	353	845	378
v/s Ratio Prot	c0.14	0.21		0.03	c0.32		c0.08	0.11		0.05	0.06	
v/s Ratio Perm	0.24		0.06	0.12			c0.18		0.03	0.11		0.05
v/c Ratio	0.93	0.49	0.14	0.42	0.87		0.81	0.43	0.11	0.54	0.24	0.22
Uniform Delay, d1	29.7	22.2	18.6	27.8	32.2		32.8	35.0	32.2	30.4	34.0	33.8
Progression Factor	0.82	0.92	1.51	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	28.9	1.0	0.4	0.8	8.1		11.6	2.9	0.6	1.7	0.1	0.3
Delay (s)	53.2	21.5	28.4	28.7	40.3		44.5	38.0	32.7	32.1	34.1	34.1
Level of Service	D	C	C	C	D		D	D	C	C	C	C
Approach Delay (s)		30.2			39.0			40.3			33.6	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	35.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

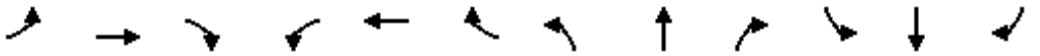
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	588	30	38	1087	209	34	16	189	223	20	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1703	3406	1524		1820	1599	1787	1683	
Flt Permitted	0.14	1.00	1.00	0.28	1.00	1.00		0.82	1.00	0.61	1.00	
Satd. Flow (perm)	254	3574	1599	507	3406	1524		1540	1599	1149	1683	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	23	646	33	42	1195	230	37	18	208	245	22	52
RTOR Reduction (vph)	0	0	21	0	0	142	0	0	150	0	29	0
Lane Group Flow (vph)	23	646	12	42	1195	88	0	55	58	245	45	0
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	30.9	28.6	28.6	33.1	29.7	29.7		22.1	22.1	35.1	35.1	
Effective Green, g (s)	32.9	30.6	30.6	35.1	31.7	31.7		23.1	23.1	35.1	36.1	
Actuated g/C Ratio	0.40	0.37	0.37	0.42	0.38	0.38		0.28	0.28	0.42	0.43	
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0		5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	161	1316	589	277	1299	581		428	444	554	731	
v/s Ratio Prot	0.01	0.18		c0.01	c0.35					c0.05	0.03	
v/s Ratio Perm	0.05		0.01	0.06		0.06		0.04	0.04	c0.14		
v/c Ratio	0.14	0.49	0.02	0.15	0.92	0.15		0.13	0.13	0.44	0.06	
Uniform Delay, d1	18.5	20.2	16.7	14.8	24.5	16.9		22.5	22.5	16.2	13.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.3	0.0	0.3	10.5	0.1		0.1	0.6	0.6	0.2	
Delay (s)	18.9	20.5	16.7	15.0	35.0	17.0		22.6	23.1	16.7	13.8	
Level of Service	B	C	B	B	D	B		C	C	B	B	
Approach Delay (s)		20.3			31.6			23.0			16.1	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	83.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

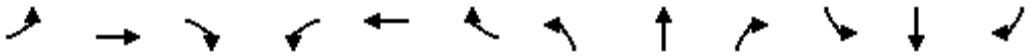
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	813	77	288	517	0	0	0	0	451	0	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.24	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	445	3574					1698	1698	1599
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	924	88	327	588	0	0	0	0	512	0	412
RTOR Reduction (vph)	0	0	51	0	0	0	0	0	0	0	0	304
Lane Group Flow (vph)	0	924	37	327	588	0	0	0	0	256	256	108
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Perm
Protected Phases		16		5	5 6 16						8	
Permitted Phases			16	5 6 16						8		8
Actuated Green, G (s)		43.7	43.7	74.3	78.3					19.7	19.7	19.7
Effective Green, g (s)		45.7	45.7	68.3	72.3					21.7	21.7	21.7
Actuated g/C Ratio		0.42	0.42	0.62	0.66					0.20	0.20	0.20
Clearance Time (s)		6.0	6.0	4.0						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)		2134	664	454	2349					335	335	315
v/s Ratio Prot		0.18		c0.10	0.16							
v/s Ratio Perm			0.02	c0.35						c0.15	0.15	0.07
v/c Ratio		0.43	0.06	0.72	0.25					0.76	0.76	0.34
Uniform Delay, d1		22.9	19.2	11.0	7.7					41.7	41.7	38.0
Progression Factor		1.00	1.00	4.80	0.24					1.00	1.00	1.00
Incremental Delay, d2		0.6	0.2	4.0	0.0					9.9	9.9	0.7
Delay (s)		23.6	19.4	56.7	1.9					51.7	51.7	38.7
Level of Service		C	B	E	A					D	D	D
Approach Delay (s)		23.2			21.5			0.0			45.9	
Approach LOS		C			C			A			D	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

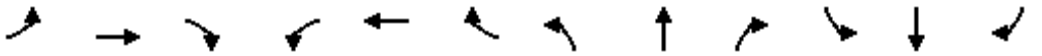
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	423	864	0	0	708	603	98	0	279	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1736	1553			
Flt Permitted	0.21	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	394	3539			3539	1583		1736	1553			
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	516	1054	0	0	863	735	120	0	340	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	392	0	0	152	0	0	0
Lane Group Flow (vph)	516	1054	0	0	863	343	0	120	188	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Perm			
Protected Phases	4	1 2 4			2			12				
Permitted Phases	1 2 4					2	12		12			
Actuated Green, G (s)	79.3	83.3			37.0	37.0		14.7	14.7			
Effective Green, g (s)	79.3	83.3			39.0	39.0		16.7	16.7			
Actuated g/C Ratio	0.72	0.76			0.35	0.35		0.15	0.15			
Clearance Time (s)	4.0				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)	576	2680			1255	561		264	236			
v/s Ratio Prot	c0.19	0.30			c0.24							
v/s Ratio Perm	c0.46					0.22		0.07	c0.12			
v/c Ratio	0.90	0.39			0.69	0.61		0.45	0.80			
Uniform Delay, d1	18.9	4.6			30.3	29.2		42.5	45.0			
Progression Factor	3.04	1.68			0.62	0.46		1.00	1.00			
Incremental Delay, d2	15.9	0.1			1.7	2.6		1.2	16.9			
Delay (s)	73.2	7.8			20.3	16.2		43.7	61.9			
Level of Service	E	A			C	B		D	E			
Approach Delay (s)		29.3			18.4			57.2			0.0	
Approach LOS		C			B			E			A	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

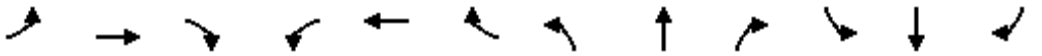
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	173	714	248	160	1054	115	200	154	226	171	374	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3521		1787	1881	1599	1770	3539	1583
Flt Permitted	0.09	1.00	1.00	0.21	1.00		0.31	1.00	1.00	0.49	1.00	1.00
Satd. Flow (perm)	168	3574	1599	389	3521		584	1881	1599	910	3539	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	206	850	295	190	1255	137	238	183	269	204	445	167
RTOR Reduction (vph)	0	0	167	0	7	0	0	0	192	0	0	89
Lane Group Flow (vph)	206	850	128	190	1385	0	238	183	77	204	445	78
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	56.5	45.7	45.7	57.5	46.2		35.0	24.0	24.0	35.0	24.0	24.0
Effective Green, g (s)	54.5	47.7	47.7	55.5	48.2		33.0	26.0	26.0	33.0	26.0	26.0
Actuated g/C Ratio	0.50	0.43	0.43	0.50	0.44		0.30	0.24	0.24	0.30	0.24	0.24
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	227	1550	693	327	1543		285	445	378	351	836	374
v/s Ratio Prot	c0.08	0.24		0.05	c0.39		c0.08	0.10		0.05	0.13	
v/s Ratio Perm	0.37		0.08	0.24			c0.17		0.05	0.12		0.05
v/c Ratio	0.91	0.55	0.18	0.58	0.90		0.84	0.41	0.20	0.58	0.53	0.21
Uniform Delay, d1	28.5	23.1	19.2	17.0	28.6		32.9	35.5	33.7	30.6	36.7	33.7
Progression Factor	1.49	0.80	1.11	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	32.4	1.2	0.5	2.6	8.6		18.6	2.8	1.2	2.4	0.7	0.3
Delay (s)	74.9	19.8	21.8	19.6	37.2		51.5	38.3	34.9	33.1	37.3	34.0
Level of Service	E	B	C	B	D		D	D	C	C	D	C
Approach Delay (s)		28.6			35.1			41.5			35.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	34.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

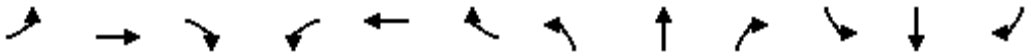
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	947	200	441	882	0	0	0	0	634	0	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.11	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	198	3574					1698	1698	1599
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	1169	247	544	1089	0	0	0	0	783	0	589
RTOR Reduction (vph)	0	0	180	0	0	0	0	0	0	0	0	92
Lane Group Flow (vph)	0	1169	67	544	1089	0	0	0	0	391	392	497
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Perm
Protected Phases		16		5	5 6 16						8	
Permitted Phases			16	5 6 16						8		8
Actuated Green, G (s)		28.0	28.0	67.0	71.0					27.0	27.0	27.0
Effective Green, g (s)		30.0	30.0	61.0	65.0					29.0	29.0	29.0
Actuated g/C Ratio		0.27	0.27	0.55	0.59					0.26	0.26	0.26
Clearance Time (s)		6.0	6.0	4.0						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)		1401	436	442	2112					448	448	422
v/s Ratio Prot		0.23		c0.26	0.30							
v/s Ratio Perm			0.04	c0.43						0.23	0.23	c0.31
v/c Ratio		0.83	0.15	1.23	0.52					0.87	0.88	1.18
Uniform Delay, d1		37.7	30.4	32.8	13.2					38.7	38.8	40.5
Progression Factor		0.91	1.21	1.87	0.90					1.00	1.00	1.00
Incremental Delay, d2		5.5	0.7	114.7	0.1					16.9	17.1	102.1
Delay (s)		39.7	37.3	176.0	12.0					55.6	55.9	142.6
Level of Service		D	D	F	B					E	E	F
Approach Delay (s)		39.3			66.7			0.0			93.0	
Approach LOS		D			E			A			F	

Intersection Summary			
HCM Average Control Delay	66.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

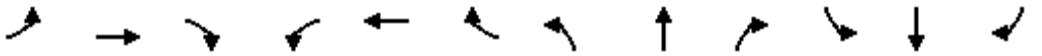
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	435	1027	0	0	1164	826	247	0	322	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3574	1599		1752	1568			
Flt Permitted	0.08	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	150	3574			3574	1599		1752	1568			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	458	1081	0	0	1225	869	260	0	339	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	442	0	0	118	0	0	0
Lane Group Flow (vph)	458	1081	0	0	1225	427	0	260	221	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Perm			
Protected Phases	4	1 2 4			2			12				
Permitted Phases	1 2 4					2	12		12			
Actuated Green, G (s)	68.4	78.4			35.0	35.0		19.6	19.6			
Effective Green, g (s)	74.4	78.4			37.0	37.0		21.6	21.6			
Actuated g/C Ratio	0.68	0.71			0.34	0.34		0.20	0.20			
Clearance Time (s)	4.0				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)	369	2547			1202	538		344	308			
v/s Ratio Prot	c0.20	0.30			c0.34							
v/s Ratio Perm	c0.64					0.27		0.15	0.14			
v/c Ratio	1.24	0.42			1.02	0.79		0.76	0.72			
Uniform Delay, d1	36.0	6.5			36.5	33.0		41.7	41.3			
Progression Factor	1.91	0.73			0.74	1.02		1.00	1.00			
Incremental Delay, d2	120.5	0.1			23.3	6.0		9.1	7.7			
Delay (s)	189.1	4.8			50.3	39.8		50.8	49.1			
Level of Service	F	A			D	D		D	D			
Approach Delay (s)		59.6			45.9			49.8			0.0	
Approach LOS		E			D			D			A	

Intersection Summary			
HCM Average Control Delay	51.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		

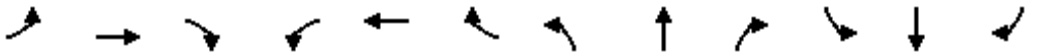
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	340	797	242	159	1128	132	374	250	121	219	211	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3518		1787	1881	1599	1787	3574	1599
Flt Permitted	0.10	1.00	1.00	0.27	1.00		0.56	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	184	3574	1599	504	3518		1062	1881	1599	646	3574	1599
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	351	822	249	164	1163	136	386	258	125	226	218	392
RTOR Reduction (vph)	0	0	141	0	8	0	0	0	63	0	0	217
Lane Group Flow (vph)	351	822	108	164	1291	0	386	258	62	226	218	175
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	59.0	45.7	45.7	48.3	38.0		36.2	24.2	24.2	35.8	24.0	24.0
Effective Green, g (s)	58.0	47.7	47.7	46.3	40.0		34.2	26.2	26.2	33.8	26.0	26.0
Actuated g/C Ratio	0.53	0.43	0.43	0.42	0.36		0.31	0.24	0.24	0.31	0.24	0.24
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	345	1550	693	321	1279		403	448	381	311	845	378
v/s Ratio Prot	c0.16	0.23		0.04	c0.37		c0.10	0.14		0.07	0.06	
v/s Ratio Perm	0.38		0.07	0.17			c0.20		0.04	0.15		0.11
v/c Ratio	1.02	0.53	0.16	0.51	1.01		0.96	0.58	0.16	0.73	0.26	0.46
Uniform Delay, d1	34.1	22.9	18.9	20.7	35.0		35.6	37.0	33.2	30.9	34.2	36.0
Progression Factor	1.23	0.46	0.89	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	50.0	1.2	0.4	1.4	27.4		33.7	5.3	0.9	8.2	0.2	0.9
Delay (s)	91.9	11.7	17.4	22.1	62.4		69.2	42.3	34.1	39.1	34.3	36.9
Level of Service	F	B	B	C	E		E	D	C	D	C	D
Approach Delay (s)		32.5			57.9			54.5			36.8	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	108.3%	ICU Level of Service	G
Analysis Period (min)	15		

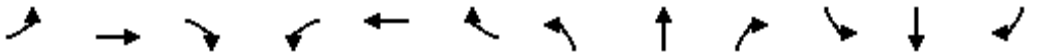
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	678	26	44	1225	236	42	18	214	283	23	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0	4.0	2.0	4.0	4.0		4.0	4.0	3.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1703	3406	1524		1818	1599	1787	1684	
Flt Permitted	0.11	1.00	1.00	0.30	1.00	1.00		0.74	1.00	0.57	1.00	
Satd. Flow (perm)	207	3574	1599	530	3406	1524		1393	1599	1065	1684	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	31	745	29	48	1346	259	46	20	235	311	25	58
RTOR Reduction (vph)	0	0	13	0	0	116	0	0	208	0	40	0
Lane Group Flow (vph)	31	745	16	48	1346	143	0	66	27	311	43	0
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	61.0	57.0	57.0	64.2	58.6	58.6		11.5	11.5	33.4	33.4	
Effective Green, g (s)	63.0	59.0	59.0	66.2	60.6	60.6		12.5	12.5	33.4	34.4	
Actuated g/C Ratio	0.57	0.54	0.54	0.60	0.55	0.55		0.11	0.11	0.30	0.31	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0		5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	190	1917	858	389	1876	840		158	182	447	527	
v/s Ratio Prot	c0.01	0.21		c0.01	c0.40					c0.12	0.03	
v/s Ratio Perm	0.09		0.01	0.07		0.09		0.05	0.02	c0.09		
v/c Ratio	0.16	0.39	0.02	0.12	0.72	0.17		0.42	0.15	0.70	0.08	
Uniform Delay, d1	13.7	14.9	11.9	9.7	18.3	12.2		45.4	43.9	32.3	26.7	
Progression Factor	1.00	1.00	1.00	0.88	0.98	0.98		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.6	0.0	0.1	1.7	0.3		1.8	0.4	4.7	0.1	
Delay (s)	14.1	15.5	12.0	8.6	19.7	12.3		47.1	44.3	37.0	26.7	
Level of Service	B	B	B	A	B	B		D	D	D	C	
Approach Delay (s)		15.3			18.2			44.9			34.8	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

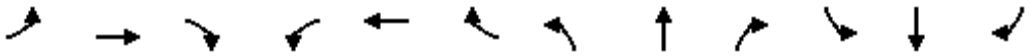
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	721	75	275	353	0	0	0	0	400	0	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.23	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	425	3574					1698	1698	1599
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	819	85	312	401	0	0	0	0	455	0	366
RTOR Reduction (vph)	0	0	58	0	0	0	0	0	0	0	0	281
Lane Group Flow (vph)	0	819	27	312	401	0	0	0	0	227	228	85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 6	5 6 16						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		30.2	30.2	56.7	66.7					21.3	21.3	21.3
Effective Green, g (s)		32.2	32.2	56.7	60.7					23.3	23.3	23.3
Actuated g/C Ratio		0.32	0.32	0.57	0.61					0.23	0.23	0.23
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)		1654	515	602	2169					396	396	373
v/s Ratio Prot		c0.16		c0.14	0.11							
v/s Ratio Perm			0.02	c0.16						0.13	0.13	0.05
v/c Ratio		0.50	0.05	0.52	0.18					0.57	0.58	0.23
Uniform Delay, d1		27.3	23.4	12.3	8.7					33.9	34.0	31.1
Progression Factor		0.66	0.28	2.61	0.50					1.00	1.00	1.00
Incremental Delay, d2		0.2	0.0	0.6	0.0					2.0	2.0	0.3
Delay (s)		18.3	6.6	32.6	4.4					36.0	36.0	31.4
Level of Service		B	A	C	A					D	D	C
Approach Delay (s)		17.2			16.7			0.0			33.9	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

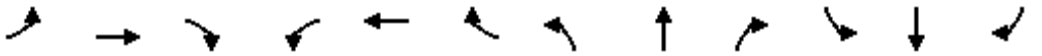
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	375	836	0	0	669	535	87	0	247	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1736	1553			
Flt Permitted	0.18	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	329	3539			3539	1583		1736	1553			
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	457	1020	0	0	816	652	106	0	301	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	331	0	0	134	0	0	0
Lane Group Flow (vph)	457	1020	0	0	816	321	0	106	167	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1 4	1 2 4			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	61.1	73.1			32.2	32.2		16.9	16.9			
Effective Green, g (s)	67.1	75.1			34.2	34.2		18.9	18.9			
Actuated g/C Ratio	0.67	0.75			0.34	0.34		0.19	0.19			
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)	695	2658			1210	541		328	294			
v/s Ratio Prot	c0.22	0.29			c0.23							
v/s Ratio Perm	0.22					0.20		0.06	c0.11			
v/c Ratio	0.66	0.38			0.67	0.59		0.32	0.57			
Uniform Delay, d1	15.4	4.4			28.1	27.2		35.0	36.8			
Progression Factor	1.52	0.60			0.56	0.38		1.00	1.00			
Incremental Delay, d2	2.2	0.1			1.2	1.4		0.6	2.5			
Delay (s)	25.6	2.7			17.0	11.6		35.6	39.4			
Level of Service	C	A			B	B		D	D			
Approach Delay (s)		9.8			14.6			38.4			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

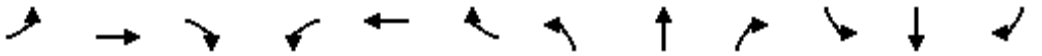
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	657	220	154	800	101	174	142	200	118	194	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3514		1787	1881	1599	1770	3539	1583
Flt Permitted	0.11	1.00	1.00	0.21	1.00		0.57	1.00	1.00	0.55	1.00	1.00
Satd. Flow (perm)	211	3574	1599	403	3514		1076	1881	1599	1018	3539	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	182	782	262	183	952	120	207	169	238	140	231	143
RTOR Reduction (vph)	0	0	161	0	9	0	0	0	176	0	0	106
Lane Group Flow (vph)	182	782	101	183	1063	0	207	169	62	140	231	37
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	47.1	36.6	36.6	46.9	36.5		35.0	24.0	24.0	35.0	24.0	24.0
Effective Green, g (s)	45.1	38.6	38.6	44.9	38.5		33.0	26.0	26.0	33.0	26.0	26.0
Actuated g/C Ratio	0.45	0.39	0.39	0.45	0.38		0.33	0.26	0.26	0.33	0.26	0.26
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	245	1380	617	311	1353		426	489	416	411	920	412
v/s Ratio Prot	c0.07	0.22		0.06	c0.30		c0.05	0.09		0.03	0.07	
v/s Ratio Perm	0.26		0.06	0.21			c0.11		0.04	0.08		0.02
v/c Ratio	0.74	0.57	0.16	0.59	0.79		0.49	0.35	0.15	0.34	0.25	0.09
Uniform Delay, d1	20.8	24.1	20.1	18.3	27.1		25.4	30.1	28.5	24.4	29.3	28.0
Progression Factor	1.20	0.63	1.07	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.5	1.5	0.5	2.8	4.6		0.9	1.9	0.8	0.5	0.1	0.1
Delay (s)	35.4	16.8	22.1	21.1	31.8		26.3	32.0	29.2	24.9	29.4	28.1
Level of Service	D	B	C	C	C		C	C	C	C	C	C
Approach Delay (s)		20.7			30.2			29.0			27.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

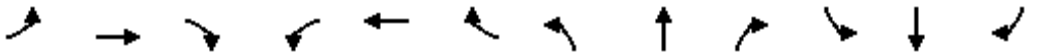
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	643	2	80	462	133	8	9	89	117	13	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1568	1770	3539	1583		1838	1599	1736	1700	
Flt Permitted	0.42	1.00	1.00	0.31	1.00	1.00		0.91	1.00	0.75	1.00	
Satd. Flow (perm)	784	3505	1568	585	3539	1583		1719	1599	1361	1700	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	20	707	2	88	508	146	9	10	98	129	14	12
RTOR Reduction (vph)	0	0	1	0	0	68	0	0	77	0	8	0
Lane Group Flow (vph)	20	707	1	88	508	78	0	19	21	129	18	0
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	1%	1%	1%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	48.8	46.4	46.4	59.2	51.6	51.6		20.0	20.0	31.0	30.0	
Effective Green, g (s)	50.8	48.4	48.4	61.0	53.6	53.6		21.0	21.0	31.0	31.0	
Actuated g/C Ratio	0.51	0.48	0.48	0.61	0.54	0.54		0.21	0.21	0.31	0.31	
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0		5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	431	1696	759	459	1897	848		361	336	444	527	
v/s Ratio Prot	0.00	c0.20		c0.02	c0.14					c0.02	0.01	
v/s Ratio Perm	0.02		0.00	0.10		0.05		0.01	0.01	c0.07		
v/c Ratio	0.05	0.42	0.00	0.19	0.27	0.09		0.05	0.06	0.29	0.03	
Uniform Delay, d1	14.5	16.7	13.3	13.4	12.6	11.3		31.6	31.6	26.3	24.1	
Progression Factor	1.00	1.00	1.00	0.60	0.62	0.29		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.8	0.0	0.2	0.3	0.2		0.1	0.3	0.4	0.1	
Delay (s)	14.6	17.4	13.3	8.2	8.1	3.5		31.6	32.0	26.7	24.2	
Level of Service	B	B	B	A	A	A		C	C	C	C	
Approach Delay (s)		17.3			7.2			31.9			26.2	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

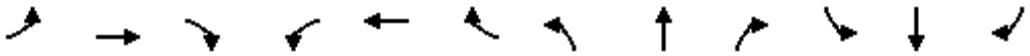
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	877	143	351	860	0	0	0	0	562	0	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.16	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	292	3574					1698	1698	1599
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	1083	177	433	1062	0	0	0	0	694	0	522
RTOR Reduction (vph)	0	0	132	0	0	0	0	0	0	0	0	82
Lane Group Flow (vph)	0	1083	45	433	1062	0	0	0	0	347	347	440
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 6	5 6 16						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		25.8	25.8	57.6	67.6					30.4	30.4	30.4
Effective Green, g (s)		27.8	27.8	57.6	61.6					32.4	32.4	32.4
Actuated g/C Ratio		0.25	0.25	0.52	0.56					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)		1298	404	585	2001					500	500	471
v/s Ratio Prot		c0.21		c0.21	0.30							
v/s Ratio Perm			0.03	0.17						0.20	0.20	c0.28
v/c Ratio		0.83	0.11	0.74	0.53					0.69	0.69	0.93
Uniform Delay, d1		38.9	31.6	24.4	15.2					34.4	34.4	37.8
Progression Factor		0.80	0.38	1.34	0.34					1.00	1.00	1.00
Incremental Delay, d2		4.6	0.1	3.8	0.2					4.2	4.2	25.8
Delay (s)		35.8	12.2	36.4	5.3					38.6	38.6	63.6
Level of Service		D	B	D	A					D	D	E
Approach Delay (s)		32.5			14.3			0.0			49.3	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

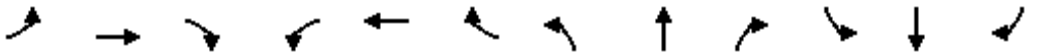
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	386	994	0	0	1033	733	229	0	286	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3574	1599		1752	1568			
Flt Permitted	0.10	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	195	3574			3574	1599		1752	1568			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	406	1046	0	0	1087	772	241	0	301	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	402	0	0	136	0	0	0
Lane Group Flow (vph)	406	1046	0	0	1087	370	0	241	165	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1 4	1 2 4			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	70.3	76.3			36.6	36.6		21.7	21.7			
Effective Green, g (s)	72.3	76.3			38.6	38.6		23.7	23.7			
Actuated g/C Ratio	0.66	0.69			0.35	0.35		0.22	0.22			
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)	616	2479			1254	561		377	338			
v/s Ratio Prot	c0.20	0.29			c0.30							
v/s Ratio Perm	0.23					0.23		0.14	0.11			
v/c Ratio	0.66	0.42			0.87	0.66		0.64	0.49			
Uniform Delay, d1	27.7	7.3			33.3	30.1		39.3	37.8			
Progression Factor	0.28	1.68			0.55	0.42		1.00	1.00			
Incremental Delay, d2	1.4	0.1			4.5	1.9		3.5	1.1			
Delay (s)	9.1	12.3			22.8	14.6		42.8	39.0			
Level of Service	A	B			C	B		D	D			
Approach Delay (s)		11.4			19.4			40.7			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

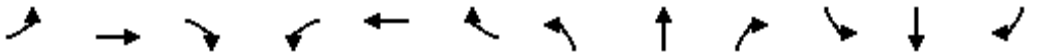
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	302	743	210	141	1001	102	325	194	118	186	195	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3525		1787	1881	1599	1787	3574	1599
Flt Permitted	0.13	1.00	1.00	0.14	1.00		0.57	1.00	1.00	0.48	1.00	1.00
Satd. Flow (perm)	240	3574	1599	265	3525		1067	1881	1599	911	3574	1599
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	311	766	216	145	1032	105	335	200	122	192	201	347
RTOR Reduction (vph)	0	0	121	0	7	0	0	0	80	0	0	241
Lane Group Flow (vph)	311	766	95	145	1130	0	335	200	42	192	201	106
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	49.4	46.4	46.4	38.0	38.0		37.0	25.0	25.0	35.0	24.0	24.0
Effective Green, g (s)	48.4	48.4	48.4	37.0	40.0		35.0	27.0	27.0	33.0	26.0	26.0
Actuated g/C Ratio	0.44	0.44	0.44	0.34	0.36		0.32	0.25	0.25	0.30	0.24	0.24
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	345	1573	704	208	1282		412	462	392	353	845	378
v/s Ratio Prot	c0.14	0.21		0.05	c0.32		c0.08	0.11		0.05	0.06	
v/s Ratio Perm	0.26		0.06	0.18			c0.18		0.03	0.11		0.07
v/c Ratio	0.90	0.49	0.13	0.70	0.88		0.81	0.43	0.11	0.54	0.24	0.28
Uniform Delay, d1	38.4	22.0	18.3	28.2	32.8		32.8	35.0	32.2	30.4	34.0	34.4
Progression Factor	0.90	0.92	2.06	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	23.8	1.0	0.4	9.7	8.9		11.6	2.9	0.6	1.7	0.1	0.4
Delay (s)	58.4	21.2	38.2	37.9	41.7		44.5	38.0	32.7	32.1	34.1	34.8
Level of Service	E	C	D	D	D		D	D	C	C	C	C
Approach Delay (s)		33.0			41.3			40.3			33.9	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

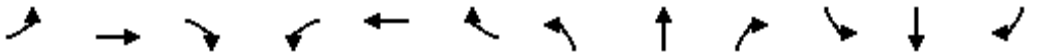
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	588	26	38	1087	209	34	16	189	223	20	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1703	3406	1524		1820	1599	1787	1683	
Flt Permitted	0.14	1.00	1.00	0.35	1.00	1.00		0.80	1.00	0.72	1.00	
Satd. Flow (perm)	268	3574	1599	630	3406	1524		1512	1599	1357	1683	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	23	646	29	42	1195	230	37	18	208	245	22	52
RTOR Reduction (vph)	0	0	14	0	0	104	0	0	164	0	36	0
Lane Group Flow (vph)	23	646	15	42	1195	126	0	55	44	245	38	0
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	58.6	56.2	56.2	63.0	58.4	58.4		22.4	22.4	34.2	33.2	
Effective Green, g (s)	60.6	58.2	58.2	65.0	60.4	60.4		23.4	23.4	34.2	34.2	
Actuated g/C Ratio	0.55	0.53	0.53	0.59	0.55	0.55		0.21	0.21	0.31	0.31	
Clearance Time (s)	5.0	6.0	6.0	5.0	6.0	6.0		5.0	5.0	4.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	195	1891	846	427	1870	837		322	340	448	523	
v/s Ratio Prot	0.00	0.18		c0.01	c0.35					c0.03	0.02	
v/s Ratio Perm	0.06		0.01	0.05		0.08		0.04	0.03	c0.14		
v/c Ratio	0.12	0.34	0.02	0.10	0.64	0.15		0.17	0.13	0.55	0.07	
Uniform Delay, d1	24.9	14.9	12.3	13.6	17.2	12.2		35.4	35.1	31.9	26.7	
Progression Factor	1.00	1.00	1.00	0.51	0.38	0.22		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.3	0.5	0.0	0.1	1.3	0.3		0.3	0.8	1.4	0.3	
Delay (s)	25.2	15.4	12.4	7.0	7.9	3.0		35.6	35.8	33.2	27.0	
Level of Service	C	B	B	A	A	A		D	D	C	C	
Approach Delay (s)		15.6			7.1			35.8			31.8	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

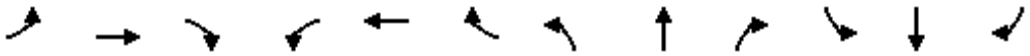
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	721	75	275	353	0	0	0	0	400	0	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	2.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.28	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	518	3574					1698	1698	1599
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	819	85	312	401	0	0	0	0	455	0	366
RTOR Reduction (vph)	0	0	50	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	819	35	312	401	0	0	0	0	227	228	366
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 6 16						8	
Permitted Phases			16	5 6 16						8		Free
Actuated Green, G (s)		43.3	43.3	68.0	78.0					20.0	20.0	110.0
Effective Green, g (s)		45.3	45.3	68.0	72.0					22.0	22.0	110.0
Actuated g/C Ratio		0.41	0.41	0.62	0.65					0.20	0.20	1.00
Clearance Time (s)		6.0	6.0	4.0						6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0						3.0	3.0	
Lane Grp Cap (vph)		2115	658	489	2339					340	340	1599
v/s Ratio Prot		0.16		c0.08	0.11							
v/s Ratio Perm			0.02	c0.31						0.13	0.13	0.23
v/c Ratio		0.39	0.05	0.64	0.17					0.67	0.67	0.23
Uniform Delay, d1		22.6	19.5	22.3	7.4					40.6	40.7	0.0
Progression Factor		0.78	0.48	0.42	0.00					1.00	1.00	1.00
Incremental Delay, d2		0.5	0.1	2.2	0.0					4.9	5.1	0.3
Delay (s)		18.2	9.4	11.6	0.0					45.5	45.8	0.3
Level of Service		B	A	B	A					D	D	A
Approach Delay (s)		17.4			5.1			0.0			25.4	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

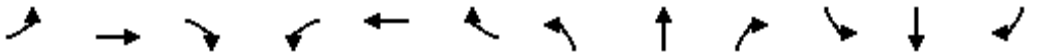
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	375	836	0	0	669	535	87	0	247	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1736	1553			
Flt Permitted	0.24	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	447	3539			3539	1583		1736	1553			
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	457	1020	0	0	816	652	106	0	301	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	391	0	0	158	0	0	0
Lane Group Flow (vph)	457	1020	0	0	816	261	0	106	143	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Perm			
Protected Phases	4	1 2 4			2			12				
Permitted Phases	1 2 4					2	12		12			
Actuated Green, G (s)	74.1	84.1			38.9	38.9		13.9	13.9			
Effective Green, g (s)	80.1	84.1			40.9	40.9		15.9	15.9			
Actuated g/C Ratio	0.73	0.76			0.37	0.37		0.14	0.14			
Clearance Time (s)	4.0				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)	586	2706			1316	589		251	224			
v/s Ratio Prot	c0.15	0.29			c0.23							
v/s Ratio Perm	c0.41					0.17		0.06	c0.09			
v/c Ratio	0.78	0.38			0.62	0.44		0.42	0.64			
Uniform Delay, d1	20.8	4.3			28.2	26.0		42.9	44.3			
Progression Factor	1.58	0.91			0.52	0.46		1.00	1.00			
Incremental Delay, d2	6.4	0.1			1.5	1.7		1.1	5.8			
Delay (s)	39.2	4.0			16.1	13.6		44.0	50.2			
Level of Service	D	A			B	B		D	D			
Approach Delay (s)		14.9			15.0			48.6			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

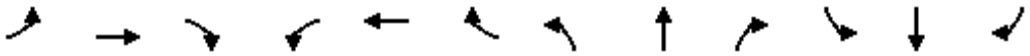
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	657	220	154	800	101	174	142	200	118	194	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3514		1787	1881	1599	1770	3539	1583
Flt Permitted	0.11	1.00	1.00	0.33	1.00		0.55	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	203	3574	1599	629	3514		1040	1881	1599	964	3539	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	182	782	262	183	952	120	207	169	238	140	231	143
RTOR Reduction (vph)	0	0	147	0	9	0	0	0	182	0	0	109
Lane Group Flow (vph)	182	782	115	183	1063	0	207	169	56	140	231	34
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	60.0	46.3	46.3	44.7	34.0		35.0	24.0	24.0	35.0	24.0	24.0
Effective Green, g (s)	59.0	48.3	48.3	42.7	36.0		33.0	26.0	26.0	33.0	26.0	26.0
Actuated g/C Ratio	0.54	0.44	0.44	0.39	0.33		0.30	0.24	0.24	0.30	0.24	0.24
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	426	1569	702	346	1150		380	445	378	362	836	374
v/s Ratio Prot	0.09	c0.22		c0.05	c0.30		c0.05	0.09		0.04	0.07	
v/s Ratio Perm	0.14		0.07	0.16			c0.11		0.04	0.08		0.02
v/c Ratio	0.43	0.50	0.16	0.53	0.92		0.54	0.38	0.15	0.39	0.28	0.09
Uniform Delay, d1	18.6	22.2	18.6	23.0	35.7		30.5	35.2	33.2	29.4	34.3	32.8
Progression Factor	1.17	0.42	0.16	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	1.0	0.5	1.5	13.7		1.6	0.5	0.2	0.7	0.2	0.1
Delay (s)	22.5	10.3	3.4	24.4	49.4		32.1	35.8	33.4	30.1	34.5	32.9
Level of Service	C	B	A	C	D		C	D	C	C	C	C
Approach Delay (s)		10.6			45.7			33.6			32.8	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		

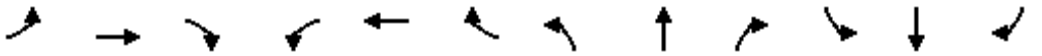
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	643	2	80	462	133	8	9	89	117	13	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0	4.0	2.0	4.0	4.0		4.0	4.0	3.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1568	1770	3539	1583		1838	1599	1736	1700	
Flt Permitted	0.47	1.00	1.00	0.33	1.00	1.00		0.88	1.00	0.57	1.00	
Satd. Flow (perm)	858	3505	1568	611	3539	1583		1653	1599	1049	1700	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	20	707	2	88	508	146	9	10	98	129	14	12
RTOR Reduction (vph)	0	0	1	0	0	54	0	0	88	0	9	0
Lane Group Flow (vph)	20	707	1	88	508	92	0	19	10	129	17	0
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	1%	1%	1%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	66.3	63.8	63.8	72.9	67.4	67.4		10.1	10.1	26.1	26.1	
Effective Green, g (s)	68.3	65.8	65.8	73.9	69.4	69.4		11.1	11.1	26.1	27.1	
Actuated g/C Ratio	0.62	0.60	0.60	0.67	0.63	0.63		0.10	0.10	0.24	0.25	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0		5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	561	2097	938	485	2233	999		167	161	330	419	
v/s Ratio Prot	0.00	c0.20		c0.01	0.14					c0.05	0.01	
v/s Ratio Perm	0.02		0.00	0.11		0.06		0.01	0.01	c0.05		
v/c Ratio	0.04	0.34	0.00	0.18	0.23	0.09		0.11	0.06	0.39	0.04	
Uniform Delay, d1	8.0	11.1	8.9	6.7	8.7	8.0		45.0	44.7	34.6	31.6	
Progression Factor	1.00	1.00	1.00	0.46	0.51	0.11		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.4	0.0	0.2	0.2	0.2		0.3	0.2	0.8	0.0	
Delay (s)	8.0	11.6	8.9	3.3	4.7	1.0		45.3	44.9	35.4	31.6	
Level of Service	A	B	A	A	A	A		D	D	D	C	
Approach Delay (s)		11.5			3.8			45.0			34.7	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

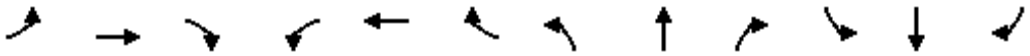
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	877	143	351	860	0	0	0	0	562	0	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	2.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.13	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	246	3574					1698	1698	1599
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	1083	177	433	1062	0	0	0	0	694	0	522
RTOR Reduction (vph)	0	0	128	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1083	49	433	1062	0	0	0	0	347	347	522
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 6 16						8	
Permitted Phases			16	5 6 16						8		Free
Actuated Green, G (s)		31.0	31.0	71.1	81.1					26.9	26.9	120.0
Effective Green, g (s)		33.0	33.0	71.1	75.1					28.9	28.9	120.0
Actuated g/C Ratio		0.28	0.28	0.59	0.63					0.24	0.24	1.00
Clearance Time (s)		6.0	6.0	4.0						6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0						3.0	3.0	
Lane Grp Cap (vph)		1412	440	508	2237					409	409	1599
v/s Ratio Prot		0.21		c0.20	0.30							
v/s Ratio Perm			0.03	c0.30						c0.20	0.20	0.33
v/c Ratio		0.77	0.11	0.85	0.47					0.85	0.85	0.33
Uniform Delay, d1		40.0	32.5	32.7	12.0					43.5	43.5	0.0
Progression Factor		0.90	0.61	0.23	0.09					1.00	1.00	1.00
Incremental Delay, d2		3.8	0.5	11.3	0.1					15.0	15.0	0.5
Delay (s)		40.0	20.2	18.9	1.2					58.5	58.5	0.5
Level of Service		D	C	B	A					E	E	A
Approach Delay (s)		37.2			6.3			0.0			33.6	
Approach LOS		D			A			A			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

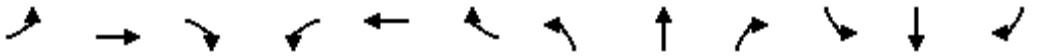
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	386	994	0	0	1033	733	229	0	286	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1787	3574			3574	1599	1665	1665	1568			
Flt Permitted	0.15	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	289	3574			3574	1599	1665	1665	1568			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	406	1046	0	0	1087	772	241	0	301	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	372	0	0	161	0	0	0
Lane Group Flow (vph)	406	1046	0	0	1087	400	120	121	140	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Perm			
Protected Phases	4	1 2 4			2			12				
Permitted Phases	1 2 4					2	12		12			
Actuated Green, G (s)	84.7	93.7			48.8	48.8	14.3	14.3	14.3			
Effective Green, g (s)	90.7	94.7			50.8	50.8	16.3	16.3	16.3			
Actuated g/C Ratio	0.76	0.79			0.42	0.42	0.14	0.14	0.14			
Clearance Time (s)	3.0				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)	501	2820			1513	677	226	226	213			
v/s Ratio Prot	c0.15	0.29			c0.30							
v/s Ratio Perm	c0.46					0.25	0.07	0.07	c0.09			
v/c Ratio	0.81	0.37			0.72	0.59	0.53	0.54	0.66			
Uniform Delay, d1	26.4	3.8			28.7	26.6	48.3	48.3	49.2			
Progression Factor	1.27	0.22			0.62	0.45	1.00	1.00	1.00			
Incremental Delay, d2	6.2	0.0			1.8	2.3	2.4	2.4	7.2			
Delay (s)	39.9	0.9			19.7	14.2	50.7	50.8	56.4			
Level of Service	D	A			B	B	D	D	E			
Approach Delay (s)		11.8			17.4			53.9			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

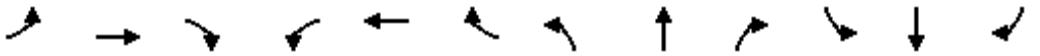
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	302	743	210	141	1001	102	325	194	118	186	195	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3525		1787	1881	1599	1787	3574	1599
Flt Permitted	0.09	1.00	1.00	0.36	1.00		0.56	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	167	3574	1599	680	3525		1058	1881	1599	818	3574	1599
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	311	766	216	145	1032	105	335	200	122	192	201	347
RTOR Reduction (vph)	0	0	112	0	7	0	0	0	72	0	0	267
Lane Group Flow (vph)	311	766	104	145	1130	0	335	200	50	192	201	80
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	68.0	55.8	55.8	48.2	39.0		37.5	24.5	24.5	36.5	24.0	24.0
Effective Green, g (s)	67.0	57.8	57.8	46.2	41.0		35.5	26.5	26.5	34.5	26.0	26.0
Actuated g/C Ratio	0.56	0.48	0.48	0.39	0.34		0.30	0.22	0.22	0.29	0.22	0.22
Clearance Time (s)	6.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	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	3.0	3.0
Lane Grp Cap (vph)	390	1721	770	337	1204		386	415	353	328	774	346
v/s Ratio Prot	c0.15	0.21		0.03	c0.32		c0.09	0.11		0.06	0.06	
v/s Ratio Perm	0.30		0.07	0.14			c0.17		0.03	0.11		0.05
v/c Ratio	0.80	0.45	0.14	0.43	0.94		0.87	0.48	0.14	0.59	0.26	0.23
Uniform Delay, d1	33.7	20.5	17.2	24.7	38.3		38.3	40.8	37.6	34.4	39.0	38.8
Progression Factor	1.13	0.29	0.12	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	9.9	0.8	0.3	0.9	14.9		18.2	4.0	0.8	2.7	0.2	0.3
Delay (s)	48.2	6.6	2.4	25.6	53.2		56.5	44.7	38.4	37.0	39.2	39.1
Level of Service	D	A	A	C	D		E	D	D	D	D	D
Approach Delay (s)		15.9			50.1			49.5			38.6	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	36.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	102.8%	ICU Level of Service	G
Analysis Period (min)	15		

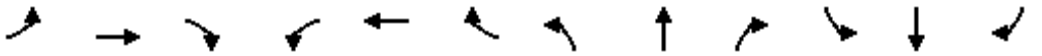
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	588	26	38	1087	209	34	16	189	223	20	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0		4.0	4.0	3.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1703	3406	1524		1820	1599	1787	1683	
Flt Permitted	0.17	1.00	1.00	0.35	1.00	1.00		0.76	1.00	0.57	1.00	
Satd. Flow (perm)	314	3574	1599	634	3406	1524		1422	1599	1068	1683	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	23	646	29	42	1195	230	37	18	208	245	22	52
RTOR Reduction (vph)	0	0	12	0	0	92	0	0	187	0	38	0
Lane Group Flow (vph)	23	646	17	42	1195	138	0	55	21	245	36	0
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	72.0	68.2	68.2	75.2	69.8	69.8		11.1	11.1	31.4	31.4	
Effective Green, g (s)	74.0	70.2	70.2	77.2	71.8	71.8		12.1	12.1	31.4	32.4	
Actuated g/C Ratio	0.62	0.59	0.59	0.64	0.60	0.60		0.10	0.10	0.26	0.27	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	253	2091	935	465	2038	912		143	161	383	454	
v/s Ratio Prot	0.00	0.18		c0.00	c0.35					c0.09	0.02	
v/s Ratio Perm	0.05		0.01	0.05		0.09		0.04	0.01	c0.08		
v/c Ratio	0.09	0.31	0.02	0.09	0.59	0.15		0.38	0.13	0.64	0.08	
Uniform Delay, d1	10.7	12.6	10.4	8.2	14.9	10.6		50.5	49.2	38.0	32.7	
Progression Factor	1.00	1.00	1.00	0.35	0.35	0.05		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.4	0.0	0.1	1.2	0.3		1.7	0.4	3.5	0.1	
Delay (s)	10.9	13.0	10.5	2.9	6.4	0.9		52.2	49.5	41.4	32.7	
Level of Service	B	B	B	A	A	A		D	D	D	C	
Approach Delay (s)		12.8			5.4			50.1			39.4	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

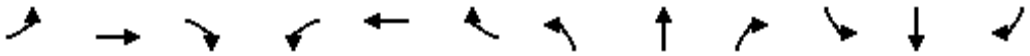
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	721	75	275	353	0	0	0	0	400	0	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	2.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.28	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	518	3574					1698	1698	1599
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	819	85	312	401	0	0	0	0	455	0	366
RTOR Reduction (vph)	0	0	50	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	819	35	312	401	0	0	0	0	227	228	366
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 6 16						8	
Permitted Phases			16	5 6 16						8		Free
Actuated Green, G (s)		43.3	43.3	68.0	78.0					20.0	20.0	110.0
Effective Green, g (s)		45.3	45.3	68.0	72.0					22.0	22.0	110.0
Actuated g/C Ratio		0.41	0.41	0.62	0.65					0.20	0.20	1.00
Clearance Time (s)		6.0	6.0	4.0						6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0						3.0	3.0	
Lane Grp Cap (vph)		2115	658	489	2339					340	340	1599
v/s Ratio Prot		0.16		c0.08	0.11							
v/s Ratio Perm			0.02	c0.31						0.13	0.13	0.23
v/c Ratio		0.39	0.05	0.64	0.17					0.67	0.67	0.23
Uniform Delay, d1		22.6	19.5	22.3	7.4					40.6	40.7	0.0
Progression Factor		0.78	0.46	0.46	0.00					1.00	1.00	1.00
Incremental Delay, d2		0.5	0.1	2.2	0.0					4.9	5.1	0.3
Delay (s)		18.1	9.2	12.4	0.0					45.5	45.8	0.3
Level of Service		B	A	B	A					D	D	A
Approach Delay (s)		17.2			5.5			0.0			25.4	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

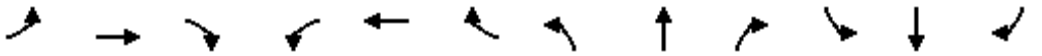
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	375	836	0	0	669	535	87	0	247	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		1736	1553			
Flt Permitted	0.24	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	447	3539			3539	1583		1736	1553			
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	457	1020	0	0	816	652	106	0	301	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	391	0	0	158	0	0	0
Lane Group Flow (vph)	457	1020	0	0	816	261	0	106	143	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Perm			
Protected Phases	4	1 2 4			2			12				
Permitted Phases	1 2 4					2	12		12			
Actuated Green, G (s)	74.1	84.1			38.9	38.9		13.9	13.9			
Effective Green, g (s)	80.1	84.1			40.9	40.9		15.9	15.9			
Actuated g/C Ratio	0.73	0.76			0.37	0.37		0.14	0.14			
Clearance Time (s)	4.0				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)	586	2706			1316	589		251	224			
v/s Ratio Prot	c0.15	0.29			c0.23							
v/s Ratio Perm	c0.41					0.17		0.06	c0.09			
v/c Ratio	0.78	0.38			0.62	0.44		0.42	0.64			
Uniform Delay, d1	20.8	4.3			28.2	26.0		42.9	44.3			
Progression Factor	1.49	0.83			0.51	0.63		1.00	1.00			
Incremental Delay, d2	6.4	0.1			1.7	1.9		1.1	5.8			
Delay (s)	37.4	3.6			16.2	18.2		44.0	50.2			
Level of Service	D	A			B	B		D	D			
Approach Delay (s)		14.1			17.1			48.6			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

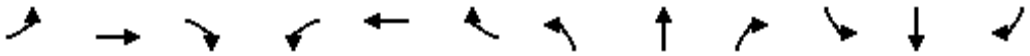
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	657	220	154	800	101	174	142	200	118	194	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	1881	1599	1770	3539	1583
Flt Permitted	0.11	1.00	1.00	0.33	1.00	1.00	0.55	1.00	1.00	0.52	1.00	1.00
Satd. Flow (perm)	203	3574	1599	629	3574	1599	1040	1881	1599	964	3539	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	182	782	262	183	952	120	207	169	238	140	231	143
RTOR Reduction (vph)	0	0	147	0	0	68	0	0	182	0	0	109
Lane Group Flow (vph)	182	782	115	183	952	52	207	169	56	140	231	34
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	60.0	46.3	46.3	44.7	34.0	34.0	35.0	24.0	24.0	35.0	24.0	24.0
Effective Green, g (s)	59.0	48.3	48.3	42.7	36.0	34.0	33.0	26.0	26.0	33.0	26.0	26.0
Actuated g/C Ratio	0.54	0.44	0.44	0.39	0.33	0.31	0.30	0.24	0.24	0.30	0.24	0.24
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	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	3.0	3.0	3.0
Lane Grp Cap (vph)	426	1569	702	346	1170	494	380	445	378	362	836	374
v/s Ratio Prot	0.09	c0.22		c0.05	c0.27		c0.05	0.09		0.04	0.07	
v/s Ratio Perm	0.14		0.07	0.16		0.03	c0.11		0.04	0.08		0.02
v/c Ratio	0.43	0.50	0.16	0.53	0.81	0.11	0.54	0.38	0.15	0.39	0.28	0.09
Uniform Delay, d1	17.8	22.2	18.6	23.0	33.9	27.1	30.5	35.2	33.2	29.4	34.3	32.8
Progression Factor	1.16	0.44	0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	1.0	0.5	1.5	6.3	0.4	1.6	0.5	0.2	0.7	0.2	0.1
Delay (s)	21.4	10.8	4.1	24.4	40.2	27.6	32.1	35.8	33.4	30.1	34.5	32.9
Level of Service	C	B	A	C	D	C	C	D	C	C	C	C
Approach Delay (s)		11.0			36.7			33.6			32.8	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

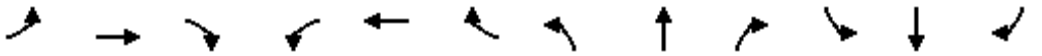
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	643	2	80	462	133	8	9	89	117	13	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0		4.0	4.0	3.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.98	1.00	0.95	1.00	
Satd. Flow (prot)	1752	3505	1568	1770	3539	1583		1838	1599	1736	1700	
Flt Permitted	0.47	1.00	1.00	0.32	1.00	1.00		0.88	1.00	0.57	1.00	
Satd. Flow (perm)	858	3505	1568	598	3539	1583		1653	1599	1049	1700	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	20	707	2	88	508	146	9	10	98	129	14	12
RTOR Reduction (vph)	0	0	1	0	0	55	0	0	88	0	9	0
Lane Group Flow (vph)	20	707	1	88	508	91	0	19	10	129	17	0
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	1%	1%	1%	4%	4%	4%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	pm+pt		
Protected Phases	5	2		1	6			8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	65.3	62.7	62.7	72.5	66.3	66.3		10.1	10.1	26.1	26.1	
Effective Green, g (s)	67.3	64.7	64.7	73.9	68.3	68.3		11.1	11.1	26.1	27.1	
Actuated g/C Ratio	0.61	0.59	0.59	0.67	0.62	0.62		0.10	0.10	0.24	0.25	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	554	2062	922	478	2197	983		167	161	330	419	
v/s Ratio Prot	0.00	c0.20		c0.01	0.14					c0.05	0.01	
v/s Ratio Perm	0.02		0.00	0.11		0.06		0.01	0.01	c0.05		
v/c Ratio	0.04	0.34	0.00	0.18	0.23	0.09		0.11	0.06	0.39	0.04	
Uniform Delay, d1	8.4	11.7	9.3	6.8	9.2	8.4		45.0	44.7	34.6	31.6	
Progression Factor	1.00	1.00	1.00	0.46	0.52	0.14		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.0	0.5	0.0	0.2	0.2	0.2		0.3	0.2	0.8	0.0	
Delay (s)	8.4	12.1	9.3	3.4	5.1	1.3		45.3	44.9	35.4	31.6	
Level of Service	A	B	A	A	A	A		D	D	D	C	
Approach Delay (s)		12.0			4.1			45.0			34.7	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

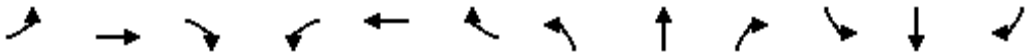
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	877	143	351	860	0	0	0	0	562	0	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	2.0
Lane Util. Factor		0.91	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.14	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	256	3574					1698	1698	1599
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	0	1083	177	433	1062	0	0	0	0	694	0	522
RTOR Reduction (vph)	0	0	127	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1083	50	433	1062	0	0	0	0	347	347	522
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 6 16						8	
Permitted Phases			16	5 6 16						8		Free
Actuated Green, G (s)		29.0	29.0	64.0	74.0					24.0	24.0	110.0
Effective Green, g (s)		31.0	31.0	64.0	68.0					26.0	26.0	110.0
Actuated g/C Ratio		0.28	0.28	0.58	0.62					0.24	0.24	1.00
Clearance Time (s)		6.0	6.0	4.0						6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0						3.0	3.0	
Lane Grp Cap (vph)		1447	451	483	2209					401	401	1599
v/s Ratio Prot		0.21		c0.20	0.30							
v/s Ratio Perm			0.03	c0.33						c0.20	0.20	0.33
v/c Ratio		0.75	0.11	0.90	0.48					0.87	0.87	0.33
Uniform Delay, d1		36.0	29.3	30.9	11.4					40.3	40.3	0.0
Progression Factor		0.86	0.54	0.23	0.08					1.00	1.00	1.00
Incremental Delay, d2		3.4	0.5	15.9	0.1					17.4	17.4	0.5
Delay (s)		34.4	16.4	23.0	1.1					57.7	57.7	0.5
Level of Service		C	B	C	A					E	E	A
Approach Delay (s)		31.9			7.4			0.0			33.2	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

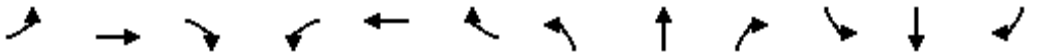
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	386	994	0	0	1033	733	229	0	286	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3574	1599		1752	1568			
Flt Permitted	0.14	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	262	3574			3574	1599		1752	1568			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	406	1046	0	0	1087	772	241	0	301	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	415	0	0	147	0	0	0
Lane Group Flow (vph)	406	1046	0	0	1087	357	0	241	154	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt					Perm	Perm		Perm			
Protected Phases	4	1 2 4			2			12				
Permitted Phases	1 2 4					2	12		12			
Actuated Green, G (s)	72.6	81.6			40.0	40.0		16.4	16.4			
Effective Green, g (s)	78.6	82.6			42.0	42.0		18.4	18.4			
Actuated g/C Ratio	0.71	0.75			0.38	0.38		0.17	0.17			
Clearance Time (s)	3.0				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)	459	2684			1365	611		293	262			
v/s Ratio Prot	c0.16	0.29			c0.30							
v/s Ratio Perm	c0.47					0.22		0.14	0.10			
v/c Ratio	0.88	0.39			0.80	0.58		0.82	0.59			
Uniform Delay, d1	28.1	4.8			30.2	27.1		44.2	42.3			
Progression Factor	1.20	0.25			0.61	0.86		1.00	1.00			
Incremental Delay, d2	12.6	0.1			3.3	2.7		16.8	3.3			
Delay (s)	46.3	1.3			21.7	25.9		61.0	45.6			
Level of Service	D	A			C	C		E	D			
Approach Delay (s)		13.9			23.4			52.4			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

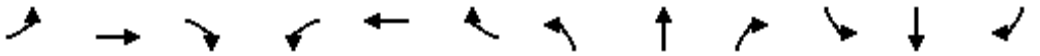
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	302	743	210	141	1001	102	325	194	118	186	195	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	6.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	1881	1599	1787	3574	1599
Flt Permitted	0.11	1.00	1.00	0.36	1.00	1.00	0.59	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	207	3574	1599	680	3574	1599	1113	1881	1599	853	3574	1599
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	311	766	216	145	1032	105	335	200	122	192	201	347
RTOR Reduction (vph)	0	0	118	0	0	55	0	0	80	0	0	265
Lane Group Flow (vph)	311	766	98	145	1032	50	335	200	42	192	201	82
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	60.0	47.9	47.9	42.5	33.4	33.4	35.0	24.0	24.0	35.0	24.0	24.0
Effective Green, g (s)	59.0	49.9	49.9	40.5	35.4	33.4	33.0	26.0	26.0	33.0	26.0	26.0
Actuated g/C Ratio	0.54	0.45	0.45	0.37	0.32	0.30	0.30	0.24	0.24	0.30	0.24	0.24
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0	3.0	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	3.0	3.0	3.0
Lane Grp Cap (vph)	436	1621	725	332	1150	486	395	445	378	341	845	378
v/s Ratio Prot	c0.15	0.21		0.03	c0.29		c0.08	0.11		0.05	0.06	
v/s Ratio Perm	0.24		0.06	0.13		0.03	c0.18		0.03	0.12		0.05
v/c Ratio	0.71	0.47	0.14	0.44	0.90	0.10	0.85	0.45	0.11	0.56	0.24	0.22
Uniform Delay, d1	26.9	20.9	17.5	23.9	35.6	27.5	34.6	35.9	32.9	30.4	34.0	33.8
Progression Factor	1.14	0.37	0.14	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.9	0.9	0.3	0.9	11.0	0.4	15.4	3.3	0.6	2.1	0.1	0.3
Delay (s)	35.6	8.6	2.8	24.8	46.6	28.0	50.0	39.1	33.5	32.5	34.1	34.1
Level of Service	D	A	A	C	D	C	D	D	C	C	C	C
Approach Delay (s)		14.1			42.6			43.6			33.7	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM Average Control Delay	31.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

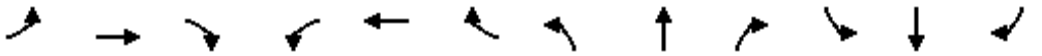
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	21	588	26	38	1087	209	34	16	189	223	20	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	4.0	4.0	3.0	4.0	4.0		4.0	4.0	3.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1703	3406	1524		1820	1599	1787	1683	
Flt Permitted	0.18	1.00	1.00	0.36	1.00	1.00		0.76	1.00	0.57	1.00	
Satd. Flow (perm)	331	3574	1599	647	3406	1524		1428	1599	1064	1683	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	23	646	29	42	1195	230	37	18	208	245	22	52
RTOR Reduction (vph)	0	0	11	0	0	87	0	0	185	0	39	0
Lane Group Flow (vph)	23	646	18	42	1195	143	0	55	23	245	35	0
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	67.6	65.0	65.0	70.6	66.5	66.5		10.9	10.9	25.9	25.9	
Effective Green, g (s)	69.6	67.0	67.0	72.6	68.5	68.5		11.9	11.9	25.9	26.9	
Actuated g/C Ratio	0.63	0.61	0.61	0.66	0.62	0.62		0.11	0.11	0.24	0.24	
Clearance Time (s)	4.0	6.0	6.0	4.0	6.0	6.0		5.0	5.0	3.0	5.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	257	2177	974	476	2121	949		154	173	329	412	
v/s Ratio Prot	0.00	0.18		c0.00	c0.35					c0.08	0.02	
v/s Ratio Perm	0.05		0.01	0.05		0.09		0.04	0.01	c0.09		
v/c Ratio	0.09	0.30	0.02	0.09	0.56	0.15		0.36	0.13	0.74	0.08	
Uniform Delay, d1	8.9	10.3	8.5	6.8	12.1	8.6		45.5	44.4	37.6	32.0	
Progression Factor	1.00	1.00	1.00	0.34	0.41	0.15		1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.3	0.0	0.1	1.0	0.3		1.4	0.3	8.8	0.1	
Delay (s)	9.0	10.6	8.5	2.4	6.0	1.6		46.9	44.7	46.4	32.1	
Level of Service	A	B	A	A	A	A		D	D	D	C	
Approach Delay (s)		10.5			5.2			45.2			43.1	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

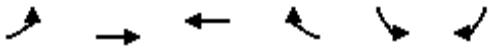
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	865	204	257	938	0	0	0	0	86	0	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	2.0
Lane Util. Factor		0.91	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4893	1524	1719	3438						1656	1482
Flt Permitted		1.00	1.00	0.20	1.00						0.95	1.00
Satd. Flow (perm)		4893	1524	355	3438						1656	1482
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	1109	262	329	1203	0	0	0	0	110	0	422
RTOR Reduction (vph)	0	0	124	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1109	138	329	1203	0	0	0	0	0	110	422
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	1%	1%	1%	9%	9%	9%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 16						6	
Permitted Phases			16	5 16						6		Free
Actuated Green, G (s)		55.6	55.6	80.2	84.7						12.8	110.0
Effective Green, g (s)		58.1	58.1	81.2	85.2						14.8	110.0
Actuated g/C Ratio		0.53	0.53	0.74	0.77						0.13	1.00
Clearance Time (s)		6.5	6.5	4.5							6.0	
Vehicle Extension (s)		3.0	3.0	3.0							3.0	
Lane Grp Cap (vph)		2584	805	573	2663						223	1482
v/s Ratio Prot		0.23		c0.13	0.35							
v/s Ratio Perm			0.09	c0.29							0.07	0.28
v/c Ratio		0.43	0.17	0.57	0.45						0.49	0.28
Uniform Delay, d1		15.8	13.5	6.8	4.3						44.1	0.0
Progression Factor		0.81	1.03	0.44	0.97						1.00	1.00
Incremental Delay, d2		0.4	0.4	1.2	0.1						1.7	0.5
Delay (s)		13.3	14.2	4.3	4.3						45.8	0.5
Level of Service		B	B	A	A						D	A
Approach Delay (s)		13.5			4.3			0.0			9.9	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	436	459	1165	114	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	0.95	0.91	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1736	3471	5085	1583		
Flt Permitted	0.13	1.00	1.00	1.00		
Satd. Flow (perm)	231	3471	5085	1583		
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	532	560	1421	139	0	0
RTOR Reduction (vph)	0	0	0	49	0	0
Lane Group Flow (vph)	532	560	1421	90	0	0
Heavy Vehicles (%)	4%	4%	2%	2%	1%	1%
Turn Type	pm+pt			Perm		
Protected Phases	4 12	2 4 12	2			
Permitted Phases	2 4 12			2		
Actuated Green, G (s)	99.0	110.0	57.5	57.5		
Effective Green, g (s)	94.5	104.5	60.0	60.0		
Actuated g/C Ratio	0.86	0.95	0.55	0.55		
Clearance Time (s)			6.5	6.5		
Vehicle Extension (s)			3.0	3.0		
Lane Grp Cap (vph)	698	3297	2774	863		
v/s Ratio Prot	c0.25	0.16	0.28			
v/s Ratio Perm	c0.40			0.06		
v/c Ratio	0.76	0.17	0.51	0.10		
Uniform Delay, d1	20.9	0.2	15.8	12.0		
Progression Factor	0.35	1.00	0.64	0.23		
Incremental Delay, d2	4.6	0.0	0.6	0.2		
Delay (s)	12.0	0.2	10.8	3.0		
Level of Service	B	A	B	A		
Approach Delay (s)		5.9	10.1		0.0	
Approach LOS		A	B		A	

Intersection Summary			
HCM Average Control Delay	8.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	459	0	0	1086	243	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3505			3574	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3505			3574	1770	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	546	0	0	1293	289	119
RTOR Reduction (vph)	0	0	0	0	0	92
Lane Group Flow (vph)	546	0	0	1293	289	27
Heavy Vehicles (%)	3%	3%	1%	1%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	74.6			74.6	23.4	23.4
Effective Green, g (s)	76.6			76.6	25.4	25.4
Actuated g/C Ratio	0.70			0.70	0.23	0.23
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)	2441			2489	409	366
v/s Ratio Prot	0.16			c0.36	c0.16	
v/s Ratio Perm						0.02
v/c Ratio	0.22			0.52	0.71	0.08
Uniform Delay, d1	6.0			7.9	38.9	33.1
Progression Factor	1.54			0.69	1.00	1.00
Incremental Delay, d2	0.2			0.7	5.5	0.1
Delay (s)	9.5			6.2	44.4	33.2
Level of Service	A			A	D	C
Approach Delay (s)	9.5			6.2	41.1	
Approach LOS	A			A	D	

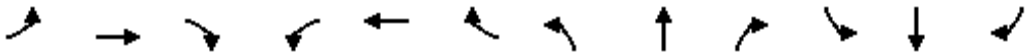
Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	475	116	211	959	128	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	3.5	6.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3546	1599	1787	3574	1736	1553
Flt Permitted	1.00	1.00	0.41	1.00	0.95	1.00
Satd. Flow (perm)	3546	1599	770	3574	1736	1553
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	565	138	251	1142	152	85
RTOR Reduction (vph)	0	49	0	0	0	73
Lane Group Flow (vph)	565	89	251	1142	152	12
Heavy Vehicles (%)	1%	1%	1%	1%	4%	4%
Bus Blockages (#/hr)	4	0	0	0	0	0
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8	4 8		2
Actuated Green, G (s)	71.0	71.0	84.1	84.1	14.9	14.9
Effective Green, g (s)	71.0	71.0	84.1	84.1	14.9	14.9
Actuated g/C Ratio	0.65	0.65	0.76	0.76	0.14	0.14
Clearance Time (s)	6.0	6.0	3.5	6.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2289	1032	677	2732	235	210
v/s Ratio Prot	0.16		0.03	c0.32	c0.09	
v/s Ratio Perm		0.06	0.25			0.01
v/c Ratio	0.25	0.09	0.37	0.42	0.65	0.05
Uniform Delay, d1	8.2	7.3	3.7	4.5	45.1	41.4
Progression Factor	0.63	0.53	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.2	0.3	0.5	6.0	0.1
Delay (s)	5.4	4.0	4.1	5.0	51.1	41.5
Level of Service	A	A	A	A	D	D
Approach Delay (s)	5.1			4.8	47.6	
Approach LOS	A			A	D	

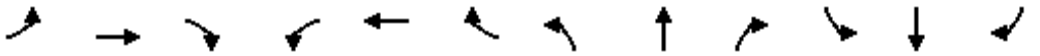
Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	552	185	709	636	56	93	123	392	125	359	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.5	4.0	6.5	6.0	4.0	4.0	4.0	4.0	4.0	6.5	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1543	3085	1380	2918	3008	1346	1770	1863	1583	1787	3409	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.16	1.00	1.00	0.66	1.00	
Satd. Flow (perm)	1543	3085	1380	2918	3008	1346	298	1863	1583	1249	3409	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	58	657	220	844	757	67	111	146	467	149	427	190
RTOR Reduction (vph)	0	0	121	0	0	27	0	0	325	0	46	0
Lane Group Flow (vph)	58	657	99	844	757	40	111	146	142	149	571	0
Heavy Vehicles (%)	17%	17%	17%	20%	20%	20%	2%	2%	2%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	Perm		
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6	8		8	4		
Actuated Green, G (s)	5.7	26.3	26.3	33.7	56.3	56.3	31.0	31.0	31.0	21.0	21.0	
Effective Green, g (s)	8.2	28.8	26.3	33.7	58.8	58.8	31.0	33.5	33.5	21.0	23.5	
Actuated g/C Ratio	0.07	0.26	0.24	0.31	0.53	0.53	0.28	0.30	0.30	0.19	0.21	
Clearance Time (s)	4.0	6.5	6.5	6.0	6.5	6.5	4.0	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	115	808	330	894	1608	719	164	567	482	238	728	
v/s Ratio Prot	0.04	c0.21		c0.29	0.25		c0.04	0.08			c0.17	
v/s Ratio Perm			0.07			0.03	0.15		0.09	0.12		
v/c Ratio	0.50	0.81	0.30	0.94	0.47	0.06	0.68	0.26	0.30	0.63	0.78	
Uniform Delay, d1	48.9	38.1	34.3	37.2	15.9	12.3	32.1	28.9	29.2	40.9	40.9	
Progression Factor	1.00	1.00	1.00	0.95	0.28	0.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	3.5	8.8	2.3	17.1	0.9	0.1	10.5	0.2	0.3	5.1	5.5	
Delay (s)	52.4	46.9	36.6	52.5	5.5	0.1	42.6	29.1	29.6	46.0	46.4	
Level of Service	D	D	D	D	A	A	D	C	C	D	D	
Approach Delay (s)		44.8			29.0			31.5			46.3	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

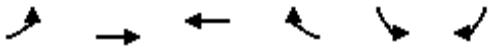
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	746	182	228	826	0	0	0	0	76	0	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	2.0
Lane Util. Factor		0.91	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4893	1524	1719	3438						1656	1482
Flt Permitted		1.00	1.00	0.24	1.00						0.95	1.00
Satd. Flow (perm)		4893	1524	432	3438						1656	1482
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	956	233	292	1059	0	0	0	0	97	0	374
RTOR Reduction (vph)	0	0	119	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	956	114	292	1059	0	0	0	0	0	97	374
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	1%	1%	1%	9%	9%	9%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 16						6	
Permitted Phases			16	5 16						6		Free
Actuated Green, G (s)		41.5	41.5	61.6	66.1						11.4	90.0
Effective Green, g (s)		44.0	44.0	62.6	66.6						13.4	90.0
Actuated g/C Ratio		0.49	0.49	0.70	0.74						0.15	1.00
Clearance Time (s)		6.5	6.5	4.5							6.0	
Vehicle Extension (s)		3.0	3.0	3.0							3.0	
Lane Grp Cap (vph)		2392	745	595	2544						247	1482
v/s Ratio Prot		0.20		c0.11	0.31							
v/s Ratio Perm			0.07	c0.23							0.06	0.25
v/c Ratio		0.40	0.15	0.49	0.42						0.39	0.25
Uniform Delay, d1		14.6	12.7	5.7	4.4						34.6	0.0
Progression Factor		0.60	0.66	4.35	0.25						1.00	1.00
Incremental Delay, d2		0.4	0.4	0.6	0.1						1.0	0.4
Delay (s)		9.3	8.8	25.2	1.2						35.7	0.4
Level of Service		A	A	C	A						D	A
Approach Delay (s)		9.2			6.4			0.0			7.7	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	424	393	1045	107	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	0.95	0.91	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1736	3471	5085	1583		
Flt Permitted	0.16	1.00	1.00	1.00		
Satd. Flow (perm)	289	3471	5085	1583		
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	517	479	1274	130	0	0
RTOR Reduction (vph)	0	0	0	61	0	0
Lane Group Flow (vph)	517	479	1274	69	0	0
Heavy Vehicles (%)	4%	4%	2%	2%	1%	1%
Turn Type	pm+pt			Perm		
Protected Phases	4 12	2 4 12	2			
Permitted Phases	2 4 12			2		
Actuated Green, G (s)	79.0	90.0	45.5	45.5		
Effective Green, g (s)	74.5	84.5	48.0	48.0		
Actuated g/C Ratio	0.83	0.94	0.53	0.53		
Clearance Time (s)			6.5	6.5		
Vehicle Extension (s)			3.0	3.0		
Lane Grp Cap (vph)	697	3259	2712	844		
v/s Ratio Prot	c0.23	0.14	0.25			
v/s Ratio Perm	c0.38			0.04		
v/c Ratio	0.74	0.15	0.47	0.08		
Uniform Delay, d1	14.6	0.2	13.1	10.2		
Progression Factor	2.32	1.00	0.65	0.33		
Incremental Delay, d2	4.0	0.0	0.5	0.2		
Delay (s)	37.8	0.2	9.0	3.6		
Level of Service	D	A	A	A		
Approach Delay (s)		19.7	8.5		0.0	
Approach LOS		B	A		A	

Intersection Summary			
HCM Average Control Delay	13.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	393	0	0	974	216	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3505			3574	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3505			3574	1770	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	468	0	0	1160	257	106
RTOR Reduction (vph)	0	0	0	0	0	82
Lane Group Flow (vph)	468	0	0	1160	257	24
Heavy Vehicles (%)	3%	3%	1%	1%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	59.7			59.7	18.3	18.3
Effective Green, g (s)	61.7			61.7	20.3	20.3
Actuated g/C Ratio	0.69			0.69	0.23	0.23
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)	2403			2450	399	357
v/s Ratio Prot	0.13			c0.32	c0.15	
v/s Ratio Perm						0.02
v/c Ratio	0.19			0.47	0.64	0.07
Uniform Delay, d1	5.1			6.6	31.6	27.4
Progression Factor	0.73			0.66	1.00	1.00
Incremental Delay, d2	0.2			0.6	3.5	0.1
Delay (s)	3.9			5.0	35.1	27.5
Level of Service	A			A	D	C
Approach Delay (s)	3.9			5.0	32.9	
Approach LOS	A			A	C	

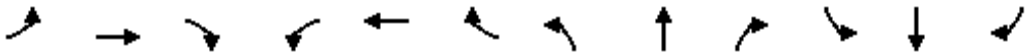
Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	422	55	100	878	102	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	3.5	6.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3546	1599	1787	3574	1736	1553
Flt Permitted	1.00	1.00	0.44	1.00	0.95	1.00
Satd. Flow (perm)	3546	1599	829	3574	1736	1553
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	502	65	119	1045	121	56
RTOR Reduction (vph)	0	24	0	0	0	49
Lane Group Flow (vph)	502	41	119	1045	121	7
Heavy Vehicles (%)	1%	1%	1%	1%	4%	4%
Bus Blockages (#/hr)	4	0	0	0	0	0
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8	4 8		2
Actuated Green, G (s)	56.7	56.7	67.2	67.2	11.8	11.8
Effective Green, g (s)	56.7	56.7	67.2	67.2	11.8	11.8
Actuated g/C Ratio	0.63	0.63	0.75	0.75	0.13	0.13
Clearance Time (s)	6.0	6.0	3.5	6.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2234	1007	693	2669	228	204
v/s Ratio Prot	0.14		0.01	c0.29	c0.07	
v/s Ratio Perm		0.03	0.11			0.00
v/c Ratio	0.22	0.04	0.17	0.39	0.53	0.04
Uniform Delay, d1	7.2	6.3	3.2	4.1	36.5	34.1
Progression Factor	0.54	0.41	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.1	0.4	2.4	0.1
Delay (s)	4.1	2.7	3.3	4.5	38.9	34.2
Level of Service	A	A	A	A	D	C
Approach Delay (s)	3.9			4.4	37.4	
Approach LOS	A			A	D	

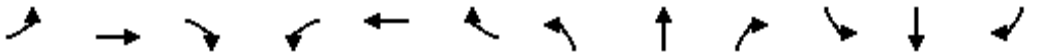
Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	502	139	629	559	41	67	83	320	85	70	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.5	4.0	6.5	6.0	4.0	4.0	4.0	4.0	4.0	6.5	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1543	3085	1380	2918	3008	1346	1770	1863	1583	1787	3298	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.49	1.00	1.00	0.69	1.00	
Satd. Flow (perm)	1543	3085	1380	2918	3008	1346	909	1863	1583	1304	3298	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	39	598	165	749	665	49	80	99	381	101	83	88
RTOR Reduction (vph)	0	0	126	0	0	20	0	0	287	0	73	0
Lane Group Flow (vph)	39	598	39	749	665	29	80	99	94	101	98	0
Heavy Vehicles (%)	17%	17%	17%	20%	20%	20%	2%	2%	2%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Perm	Perm		
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2			6	8		8	4		
Actuated Green, G (s)	2.4	21.1	21.1	30.2	50.9	50.9	19.7	19.7	19.7	12.5	12.5	
Effective Green, g (s)	4.9	23.6	21.1	30.2	53.4	53.4	19.7	22.2	22.2	12.5	15.0	
Actuated g/C Ratio	0.05	0.26	0.23	0.34	0.59	0.59	0.22	0.25	0.25	0.14	0.17	
Clearance Time (s)	4.0	6.5	6.5	6.0	6.5	6.5	4.0	6.5	6.5	6.5	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	84	809	324	979	1785	799	230	460	390	181	550	
v/s Ratio Prot	0.03	c0.19		c0.26	0.22		c0.01	0.05			0.03	
v/s Ratio Perm			0.03			0.02	0.06		0.06	c0.08		
v/c Ratio	0.46	0.74	0.12	0.77	0.37	0.04	0.35	0.22	0.24	0.56	0.18	
Uniform Delay, d1	41.3	30.4	27.1	26.7	9.6	7.6	29.0	27.0	27.2	36.2	32.2	
Progression Factor	1.00	1.00	1.00	0.54	0.62	0.24	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	4.0	6.0	0.8	3.4	0.6	0.1	0.9	0.2	0.3	3.7	0.2	
Delay (s)	45.3	36.4	27.9	18.0	6.5	1.9	29.9	27.2	27.5	39.9	32.4	
Level of Service	D	D	C	B	A	A	C	C	C	D	C	
Approach Delay (s)		35.1			12.2			27.8			35.1	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

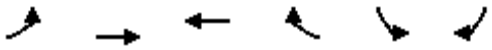
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	746	182	228	826	0	0	0	0	76	0	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	2.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3406	1524	1719	1810						1656	1482
Flt Permitted		1.00	1.00	0.15	1.00						0.95	1.00
Satd. Flow (perm)		3406	1524	279	1810						1656	1482
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	956	233	292	1059	0	0	0	0	97	0	374
RTOR Reduction (vph)	0	0	139	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	956	94	292	1059	0	0	0	0	0	97	374
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	1%	1%	1%	9%	9%	9%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 16						6	
Permitted Phases			16	5 16						6		Free
Actuated Green, G (s)		34.0	34.0	63.0	67.5						10.0	90.0
Effective Green, g (s)		36.5	36.5	64.0	68.0						12.0	90.0
Actuated g/C Ratio		0.41	0.41	0.71	0.76						0.13	1.00
Clearance Time (s)		6.5	6.5	4.5							6.0	
Vehicle Extension (s)		3.0	3.0	3.0							3.0	
Lane Grp Cap (vph)		1381	618	670	1368						221	1482
v/s Ratio Prot		0.28		0.14	c0.59							
v/s Ratio Perm			0.06	0.17							0.06	0.25
v/c Ratio		0.69	0.15	0.44	0.77						0.44	0.25
Uniform Delay, d1		22.1	17.0	8.4	6.5						35.9	0.0
Progression Factor		1.00	1.00	3.21	2.89						1.00	1.00
Incremental Delay, d2		2.9	0.5	0.3	1.9						1.4	0.4
Delay (s)		25.0	17.5	27.4	20.6						37.3	0.4
Level of Service		C	B	C	C						D	A
Approach Delay (s)		23.5			22.1			0.0			8.0	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	424	393	1045	107	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	1.00	0.95	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1736	1827	3539	1583		
Flt Permitted	0.11	1.00	1.00	1.00		
Satd. Flow (perm)	202	1827	3539	1583		
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	517	479	1274	130	0	0
RTOR Reduction (vph)	0	0	0	70	0	0
Lane Group Flow (vph)	517	479	1274	60	0	0
Heavy Vehicles (%)	4%	4%	2%	2%	1%	1%
Turn Type	pm+pt			Perm		
Protected Phases	4	2 4 12	2			
Permitted Phases	2 4 12			2		
Actuated Green, G (s)	79.5	90.0	39.2	39.2		
Effective Green, g (s)	74.5	84.5	41.7	41.7		
Actuated g/C Ratio	0.83	0.94	0.46	0.46		
Clearance Time (s)	4.5		6.5	6.5		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	581	1715	1640	733		
v/s Ratio Prot	c0.24	0.26	0.36			
v/s Ratio Perm	c0.49			0.04		
v/c Ratio	0.89	0.28	0.78	0.08		
Uniform Delay, d1	19.8	0.2	20.2	13.5		
Progression Factor	1.85	1.00	0.60	8.50		
Incremental Delay, d2	11.7	0.1	2.3	0.0		
Delay (s)	48.4	0.3	14.5	114.6		
Level of Service	D	A	B	F		
Approach Delay (s)		25.3	23.8		0.0	
Approach LOS		C	C		A	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	393	0	0	974	216	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1845			1881	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1845			1881	1770	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	468	0	0	1160	257	106
RTOR Reduction (vph)	0	0	0	0	0	87
Lane Group Flow (vph)	468	0	0	1160	257	19
Heavy Vehicles (%)	3%	3%	1%	1%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	63.5			63.5	14.5	14.5
Effective Green, g (s)	65.5			65.5	16.5	16.5
Actuated g/C Ratio	0.73			0.73	0.18	0.18
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)	1343			1369	325	290
v/s Ratio Prot	0.25			c0.62	c0.15	
v/s Ratio Perm						0.01
v/c Ratio	0.35			0.85	0.79	0.07
Uniform Delay, d1	4.5			8.7	35.1	30.4
Progression Factor	1.74			1.00	1.00	1.00
Incremental Delay, d2	0.7			6.7	12.3	0.1
Delay (s)	8.5			15.4	47.4	30.5
Level of Service	A			B	D	C
Approach Delay (s)	8.5			15.4	42.5	
Approach LOS	A			B	D	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

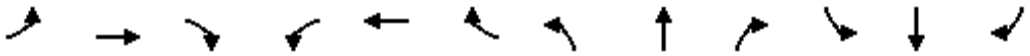
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	422	55	100	878	102	47
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	502	65	119	1045	121	56
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						3
Median type	Raised			Raised		
Median storage veh)	2			2		
Upstream signal (ft)	456					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			568		1818	535
vC1, stage 1 conf vol					535	
vC2, stage 2 conf vol					1283	
vCu, unblocked vol			473		1851	437
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			88		42	90
cM capacity (veh/h)			993		210	559

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	568	119	1045	177
Volume Left	0	119	0	121
Volume Right	65	0	0	56
cSH	1700	993	1700	307
Volume to Capacity	0.33	0.12	0.61	0.58
Queue Length 95th (ft)	0	10	0	85
Control Delay (s)	0.0	9.1	0.0	33.4
Lane LOS		A		D
Approach Delay (s)	0.0	0.9		33.4
Approach LOS				D

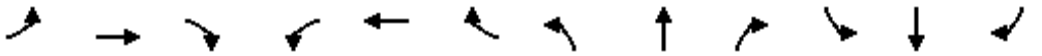
Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	502	139	629	559	41	67	83	320	85	70	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2983		1504	1583	1346	1770	1863	1583	1787	1736	
Flt Permitted		0.89		0.95	1.00	1.00	0.49	1.00	1.00	0.69	1.00	
Satd. Flow (perm)		2652		1504	1583	1346	908	1863	1583	1304	1736	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	39	598	165	749	665	49	80	99	381	101	83	88
RTOR Reduction (vph)	0	21	0	0	0	19	0	0	315	0	48	0
Lane Group Flow (vph)	0	781	0	749	665	30	80	99	66	101	123	0
Heavy Vehicles (%)	17%	17%	17%	20%	20%	20%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			Prot		Perm	pm+pt		Perm	pm+pt		
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6	8		8	4		
Actuated Green, G (s)		16.1		24.2	45.3	45.3	15.7	11.1	11.1	15.7	11.1	
Effective Green, g (s)		18.6		24.2	47.8	47.8	15.7	13.6	13.6	15.7	13.6	
Actuated g/C Ratio		0.24		0.31	0.61	0.61	0.20	0.17	0.17	0.20	0.17	
Clearance Time (s)		6.5		5.0	6.5	6.5	4.0	6.5	6.5	4.0	6.5	
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)		632		467	970	825	234	325	276	291	303	
v/s Ratio Prot				c0.50	0.42		0.02	0.05		c0.02	c0.07	
v/s Ratio Perm		c0.29				0.02	0.05		0.04	0.05		
v/c Ratio		1.24		1.60	0.69	0.04	0.34	0.30	0.24	0.35	0.41	
Uniform Delay, d1		29.7		26.9	10.1	6.0	26.1	28.1	27.8	26.4	28.6	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		119.1		281.6	3.9	0.1	0.9	0.5	0.5	0.7	0.9	
Delay (s)		148.8		308.5	14.0	6.1	27.0	28.6	28.2	27.1	29.5	
Level of Service		F		F	B	A	C	C	C	C	C	
Approach Delay (s)		148.8			164.5			28.1			28.6	
Approach LOS		F			F			C			C	

Intersection Summary			
HCM Average Control Delay	123.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	78.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

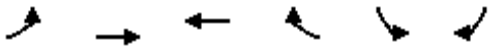
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1206	428	297	708	0	0	0	0	70	0	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	2.0
Lane Util. Factor		0.91	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4988	1553	1719	3438						1787	1599
Flt Permitted		1.00	1.00	0.11	1.00						0.95	1.00
Satd. Flow (perm)		4988	1553	197	3438						1787	1599
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	1453	516	358	853	0	0	0	0	84	0	166
RTOR Reduction (vph)	0	0	259	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1453	257	358	853	0	0	0	0	0	84	166
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 16						6	
Permitted Phases			16	5 16						6		Free
Actuated Green, G (s)		41.7	41.7	63.0	67.5						10.0	90.0
Effective Green, g (s)		44.2	44.2	64.0	68.0						12.0	90.0
Actuated g/C Ratio		0.49	0.49	0.71	0.76						0.13	1.00
Clearance Time (s)		6.5	6.5	4.5							6.0	
Vehicle Extension (s)		3.0	3.0	3.0							3.0	
Lane Grp Cap (vph)		2450	763	509	2598						238	1599
v/s Ratio Prot		0.29		c0.17	0.25							
v/s Ratio Perm			0.17	c0.33							0.05	0.10
v/c Ratio		0.59	0.34	0.70	0.33						0.35	0.10
Uniform Delay, d1		16.4	14.0	18.6	3.6						35.5	0.0
Progression Factor		0.55	0.06	0.63	0.31						1.00	1.00
Incremental Delay, d2		0.8	0.9	3.7	0.1						0.9	0.1
Delay (s)		9.9	1.7	15.5	1.2						36.4	0.1
Level of Service		A	A	B	A						D	A
Approach Delay (s)		7.8			5.4			0.0			12.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	713	596	998	139	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	0.95	0.91	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1770	3539	5036	1568		
Flt Permitted	0.15	1.00	1.00	1.00		
Satd. Flow (perm)	285	3539	5036	1568		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	735	614	1029	143	0	0
RTOR Reduction (vph)	0	0	0	98	0	0
Lane Group Flow (vph)	735	614	1029	45	0	0
Heavy Vehicles (%)	2%	2%	3%	3%	1%	1%
Turn Type	pm+pt			Perm		
Protected Phases	4 12	2 4 12	2			
Permitted Phases	2 4 12	2 4 12		2		
Actuated Green, G (s)	77.5	90.0	25.6	25.6		
Effective Green, g (s)	78.5	84.5	28.1	28.1		
Actuated g/C Ratio	0.87	0.94	0.31	0.31		
Clearance Time (s)			6.5	6.5		
Vehicle Extension (s)			3.0	3.0		
Lane Grp Cap (vph)	1113	3323	1572	490		
v/s Ratio Prot	c0.38	0.17	c0.20			
v/s Ratio Perm	c0.19			0.03		
v/c Ratio	0.66	0.18	0.65	0.09		
Uniform Delay, d1	8.8	0.2	26.8	21.9		
Progression Factor	0.45	1.00	0.94	0.90		
Incremental Delay, d2	1.2	0.0	2.0	0.3		
Delay (s)	5.2	0.2	27.2	20.1		
Level of Service	A	A	C	C		
Approach Delay (s)		2.9	26.3		0.0	
Approach LOS		A	C		A	

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	596	0	0	952	186	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	2.0	2.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3505	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3505	1770	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	701	0	0	1120	219	121
RTOR Reduction (vph)	0	0	0	0	0	96
Lane Group Flow (vph)	701	0	0	1120	219	25
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Turn Type						Perm
Protected Phases	3 10			3 10	9	
Permitted Phases						9
Actuated Green, G (s)	63.1			63.1	16.4	16.4
Effective Green, g (s)	61.1			61.1	18.4	18.4
Actuated g/C Ratio	0.68			0.68	0.20	0.20
Clearance Time (s)					4.0	4.0
Vehicle Extension (s)					3.0	3.0
Lane Grp Cap (vph)	2403			2380	362	324
v/s Ratio Prot	0.20			c0.32	c0.12	
v/s Ratio Perm						0.02
v/c Ratio	0.29			0.47	0.60	0.08
Uniform Delay, d1	5.8			6.8	32.5	28.9
Progression Factor	0.44			0.72	1.00	1.00
Incremental Delay, d2	0.1			0.1	2.8	0.1
Delay (s)	2.6			5.1	35.3	29.0
Level of Service	A			A	D	C
Approach Delay (s)	2.6			5.1	33.1	
Approach LOS	A			A	C	

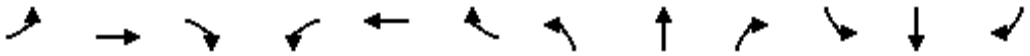
Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	588	67	64	835	120	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	3.5	6.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3574	1599	1787	3574	1770	1583
Flt Permitted	1.00	1.00	0.38	1.00	0.95	1.00
Satd. Flow (perm)	3574	1599	717	3574	1770	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	626	71	68	888	128	97
RTOR Reduction (vph)	0	26	0	0	0	84
Lane Group Flow (vph)	626	45	68	888	128	13
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	57.1	57.1	67.0	67.0	12.0	12.0
Effective Green, g (s)	57.1	57.1	67.0	67.0	12.0	12.0
Actuated g/C Ratio	0.63	0.63	0.74	0.74	0.13	0.13
Clearance Time (s)	6.0	6.0	3.5	6.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2268	1014	610	2661	236	211
v/s Ratio Prot	0.18		0.01	c0.25	c0.07	
v/s Ratio Perm		0.03	0.08			0.01
v/c Ratio	0.28	0.04	0.11	0.33	0.54	0.06
Uniform Delay, d1	7.3	6.2	3.2	3.9	36.4	34.1
Progression Factor	0.26	0.08	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.1	0.3	2.5	0.1
Delay (s)	2.2	0.6	3.3	4.2	39.0	34.2
Level of Service	A	A	A	A	D	C
Approach Delay (s)	2.0			4.2	36.9	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

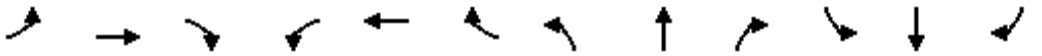
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	753	183	369	413	78	118	136	775	93	83	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.5	4.0	6.5	6.0	4.0	4.0	4.0	4.0	1.5	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	3400	3505	1568	1770	1863	1583	1787	3413	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.61	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	1787	3574	1599	3400	3505	1568	1137	1863	1583	1068	3413	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	141	886	215	434	486	92	139	160	912	109	98	42
RTOR Reduction (vph)	0	0	148	0	0	52	0	0	0	0	34	0
Lane Group Flow (vph)	141	886	67	434	486	40	139	160	912	109	106	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Free	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		Free	4		
Actuated Green, G (s)	12.3	26.7	26.7	20.4	36.8	36.8	21.1	15.1	90.0	18.7	13.9	
Effective Green, g (s)	14.8	29.2	26.7	20.4	39.3	39.3	21.1	17.6	90.0	18.7	16.4	
Actuated g/C Ratio	0.16	0.32	0.30	0.23	0.44	0.44	0.23	0.20	1.00	0.21	0.18	
Clearance Time (s)	4.0	6.5	6.5	6.0	6.5	6.5	4.0	6.5		4.0	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	294	1160	474	771	1531	685	309	364	1583	260	622	
v/s Ratio Prot	0.08	c0.25		0.13	0.14		0.03	0.09		0.02	0.03	
v/s Ratio Perm			0.04			0.03	0.08		c0.58	0.06		
v/c Ratio	0.48	0.76	0.14	0.56	0.32	0.06	0.45	0.44	0.58	0.42	0.17	
Uniform Delay, d1	34.1	27.3	23.2	30.8	16.6	14.7	28.6	31.9	0.0	30.1	31.1	
Progression Factor	1.00	1.00	1.00	1.50	0.42	0.14	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.2	4.8	0.6	0.9	0.5	0.2	1.0	0.9	1.5	1.1	0.1	
Delay (s)	35.3	32.1	23.8	47.1	7.4	2.2	29.7	32.7	1.5	31.2	31.2	
Level of Service	D	C	C	D	A	A	C	C	A	C	C	
Approach Delay (s)		31.0			24.0			8.9			31.2	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

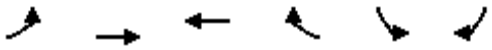
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1206	428	297	708	0	0	0	0	70	0	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	2.0
Lane Util. Factor		0.95	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3471	1553	1719	1810						1787	1599
Flt Permitted		1.00	1.00	0.12	1.00						0.95	1.00
Satd. Flow (perm)		3471	1553	214	1810						1787	1599
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	1453	516	358	853	0	0	0	0	84	0	166
RTOR Reduction (vph)	0	0	285	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1453	231	358	853	0	0	0	0	0	84	166
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 16						6	
Permitted Phases			16	5 16						6		Free
Actuated Green, G (s)		33.3	33.3	52.4	56.9						10.6	80.0
Effective Green, g (s)		35.8	35.8	53.4	57.4						12.6	80.0
Actuated g/C Ratio		0.45	0.45	0.67	0.72						0.16	1.00
Clearance Time (s)		6.5	6.5	4.5							6.0	
Vehicle Extension (s)		3.0	3.0	3.0							3.0	
Lane Grp Cap (vph)		1553	695	512	1299						281	1599
v/s Ratio Prot		c0.42		0.17	c0.47							
v/s Ratio Perm			0.15	0.30							0.05	0.10
v/c Ratio		0.94	0.33	0.70	0.66						0.30	0.10
Uniform Delay, d1		21.0	14.3	18.1	6.0						29.8	0.0
Progression Factor		1.00	1.00	1.65	2.87						1.00	1.00
Incremental Delay, d2		11.9	1.3	2.6	0.7						0.6	0.1
Delay (s)		32.9	15.6	32.5	18.1						30.4	0.1
Level of Service		C	B	C	B						C	A
Approach Delay (s)		28.4			22.3			0.0			10.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	713	596	998	139	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	1.00	0.95	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1770	1863	3505	1568		
Flt Permitted	0.13	1.00	1.00	1.00		
Satd. Flow (perm)	234	1863	3505	1568		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	735	614	1029	143	0	0
RTOR Reduction (vph)	0	0	0	97	0	0
Lane Group Flow (vph)	735	614	1029	46	0	0
Heavy Vehicles (%)	2%	2%	3%	3%	1%	1%
Turn Type	pm+pt			Perm		
Protected Phases	4	2 4 12	2			
Permitted Phases	2 4 12	2 4 12		2		
Actuated Green, G (s)	69.5	80.0	23.5	23.5		
Effective Green, g (s)	64.5	74.5	26.0	26.0		
Actuated g/C Ratio	0.81	0.93	0.32	0.32		
Clearance Time (s)	4.5		6.5	6.5		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	753	1735	1139	510		
v/s Ratio Prot	c0.36	0.33	c0.29			
v/s Ratio Perm	c0.43			0.03		
v/c Ratio	0.98	0.35	0.90	0.09		
Uniform Delay, d1	18.0	0.3	25.8	18.8		
Progression Factor	2.14	1.00	0.90	0.99		
Incremental Delay, d2	14.1	0.1	7.1	0.2		
Delay (s)	52.6	0.3	30.3	18.8		
Level of Service	D	A	C	B		
Approach Delay (s)		28.8	28.9		0.0	
Approach LOS		C	C		A	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	596	0	0	952	186	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1863			1845	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1845	1770	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	701	0	0	1120	219	121
RTOR Reduction (vph)	0	0	0	0	0	100
Lane Group Flow (vph)	701	0	0	1120	219	21
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	56.4			56.4	11.6	11.6
Effective Green, g (s)	58.4			58.4	13.6	13.6
Actuated g/C Ratio	0.73			0.73	0.17	0.17
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)	1360			1347	301	269
v/s Ratio Prot	0.38			c0.61	c0.12	
v/s Ratio Perm						0.01
v/c Ratio	0.52			0.83	0.73	0.08
Uniform Delay, d1	4.7			7.4	31.4	27.9
Progression Factor	1.11			1.00	1.00	1.00
Incremental Delay, d2	1.4			6.1	8.5	0.1
Delay (s)	6.6			13.5	39.9	28.0
Level of Service	A			B	D	C
Approach Delay (s)	6.6			13.5	35.7	
Approach LOS	A			B	D	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

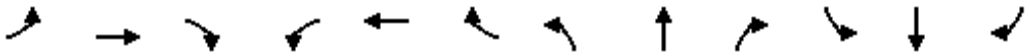
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	588	67	64	835	120	91
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	626	71	68	888	128	97
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						3
Median type	Raised			Raised		
Median storage veh)	2			2		
Upstream signal (ft)	456					
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			697		1686	661
vC1, stage 1 conf vol					661	
vC2, stage 2 conf vol					1024	
vCu, unblocked vol			548		1720	506
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			92		53	80
cM capacity (veh/h)			866		272	478

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	697	68	888	224
Volume Left	0	68	0	128
Volume Right	71	0	0	97
cSH	1700	866	1700	478
Volume to Capacity	0.41	0.08	0.52	0.47
Queue Length 95th (ft)	0	6	0	62
Control Delay (s)	0.0	9.5	0.0	23.0
Lane LOS		A		C
Approach Delay (s)	0.0	0.7		23.0
Approach LOS				C

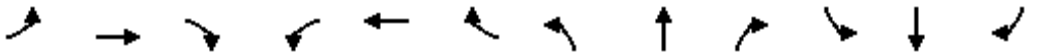
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	753	183	369	413	78	118	166	775	93	83	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3462		1752	1845	1568	1770	1863	1583	1787	1797	
Flt Permitted		0.82		0.95	1.00	1.00	0.65	1.00	1.00	0.57	1.00	
Satd. Flow (perm)		2845		1752	1845	1568	1203	1863	1583	1079	1797	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	141	886	215	434	486	92	139	195	912	109	98	42
RTOR Reduction (vph)	0	18	0	0	0	52	0	0	271	0	15	0
Lane Group Flow (vph)	0	1224	0	434	486	40	139	195	641	109	125	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			Prot		Perm	pm+pt		Perm	pm+pt		
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2					6	8		8	4		
Actuated Green, G (s)		23.0		13.0	41.0	41.0	42.0	36.0	36.0	42.0	36.0	
Effective Green, g (s)		25.5		13.0	43.5	43.5	42.0	38.5	38.5	42.0	38.5	
Actuated g/C Ratio		0.26		0.13	0.44	0.44	0.42	0.38	0.38	0.42	0.38	
Clearance Time (s)		6.5		5.0	6.5	6.5	4.0	6.5	6.5	4.0	6.5	
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)		725		228	803	682	539	717	609	496	692	
v/s Ratio Prot				c0.25	0.26		c0.02	0.10		0.01	0.07	
v/s Ratio Perm		c0.43				0.03	0.09		c0.41	0.08		
v/c Ratio		1.69		1.90	0.61	0.06	0.26	0.27	1.05	0.22	0.18	
Uniform Delay, d1		37.2		43.5	21.7	16.4	18.3	21.1	30.8	18.0	20.3	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		315.8		422.6	3.4	0.2	0.3	0.2	51.3	0.2	0.1	
Delay (s)		353.0		466.1	25.0	16.5	18.5	21.3	82.0	18.2	20.4	
Level of Service		F		F	C	B	B	C	F	B	C	
Approach Delay (s)		353.0			213.4			65.4			19.5	
Approach LOS		F			F			E			B	

Intersection Summary			
HCM Average Control Delay	197.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	17.0
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	15		

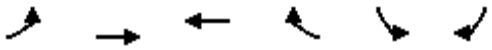
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	720	370	285	525	0	0	0	0	65	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		1827	1553	1719	1810						1787	1599
Flt Permitted		1.00	1.00	0.10	1.00						0.95	1.00
Satd. Flow (perm)		1827	1553	187	1810						1787	1599
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	867	446	343	633	0	0	0	0	78	0	54
RTOR Reduction (vph)	0	0	199	0	0	0	0	0	0	0	0	47
Lane Group Flow (vph)	0	867	247	343	633	0	0	0	0	0	78	7
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5	5 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		47.3	47.3	63.0	69.5						10.0	10.0
Effective Green, g (s)		49.8	49.8	64.0	64.0						12.0	12.0
Actuated g/C Ratio		0.55	0.55	0.71	0.71						0.13	0.13
Clearance Time (s)		6.5	6.5	4.5							6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0							3.0	3.0
Lane Grp Cap (vph)		1011	859	409	1287						238	213
v/s Ratio Prot		c0.47		c0.15	0.35							
v/s Ratio Perm			0.16	0.45							0.04	0.00
v/c Ratio		0.86	0.29	0.84	0.49						0.33	0.03
Uniform Delay, d1		17.1	10.7	27.6	5.8						35.3	34.0
Progression Factor		1.00	1.00	0.79	0.10						1.00	1.00
Incremental Delay, d2		9.4	0.8	10.2	0.2						0.8	0.1
Delay (s)		26.4	11.5	32.0	0.8						36.2	34.0
Level of Service		C	B	C	A						D	C
Approach Delay (s)		21.4			11.7			0.0			35.3	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	400	385	810	90	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1770	1863	1845	1568		
Flt Permitted	0.13	1.00	1.00	1.00		
Satd. Flow (perm)	233	1863	1845	1568		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	412	397	835	93	0	0
RTOR Reduction (vph)	0	0	0	42	0	0
Lane Group Flow (vph)	412	397	835	51	0	0
Heavy Vehicles (%)	2%	2%	3%	3%	1%	1%
Turn Type	D.P+P			Perm		
Protected Phases	4 12	2 4 12	2			
Permitted Phases	2			2		
Actuated Green, G (s)	77.5	90.0	47.3	47.3		
Effective Green, g (s)	78.5	84.5	49.8	49.8		
Actuated g/C Ratio	0.87	0.94	0.55	0.55		
Clearance Time (s)			6.5	6.5		
Vehicle Extension (s)			3.0	3.0		
Lane Grp Cap (vph)	728	1749	1021	868		
v/s Ratio Prot	c0.19	0.21	c0.45			
v/s Ratio Perm	0.30			0.03		
v/c Ratio	0.57	0.23	0.82	0.06		
Uniform Delay, d1	15.3	0.2	16.4	9.3		
Progression Factor	1.70	1.00	0.77	0.76		
Incremental Delay, d2	0.6	0.0	5.7	0.1		
Delay (s)	26.6	0.3	18.3	7.2		
Level of Service	C	A	B	A		
Approach Delay (s)		13.7	17.2		0.0	
Approach LOS		B	B		A	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	385	0	0	770	130	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1863			1845	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1845	1770	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	453	0	0	906	153	53
RTOR Reduction (vph)	0	0	0	0	0	45
Lane Group Flow (vph)	453	0	0	906	153	8
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	66.0			66.0	12.0	12.0
Effective Green, g (s)	68.0			68.0	14.0	14.0
Actuated g/C Ratio	0.76			0.76	0.16	0.16
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)	1408			1394	275	246
v/s Ratio Prot	0.24			c0.49	c0.09	
v/s Ratio Perm						0.01
v/c Ratio	0.32			0.65	0.56	0.03
Uniform Delay, d1	3.6			5.3	35.1	32.3
Progression Factor	0.13			1.00	1.00	1.00
Incremental Delay, d2	0.6			2.4	2.4	0.1
Delay (s)	1.1			7.6	37.6	32.3
Level of Service	A			A	D	C
Approach Delay (s)	1.1			7.6	36.2	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

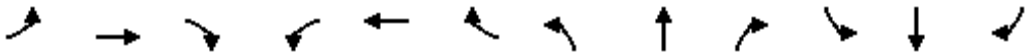
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	370	60	55	655	115	65
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	394	64	59	697	122	69
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						3
Median type	Raised			Raised		
Median storage veh)	2			2		
Upstream signal (ft)	456					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			457		1239	426
vC1, stage 1 conf vol					426	
vC2, stage 2 conf vol					814	
vCu, unblocked vol			383		1221	349
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			95		67	89
cM capacity (veh/h)			1102		371	648

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	457	59	697	191
Volume Left	0	59	0	122
Volume Right	64	0	0	69
cSH	1700	1102	1700	581
Volume to Capacity	0.27	0.05	0.41	0.33
Queue Length 95th (ft)	0	4	0	36
Control Delay (s)	0.0	8.4	0.0	16.4
Lane LOS		A		C
Approach Delay (s)	0.0	0.7		16.4
Approach LOS				C

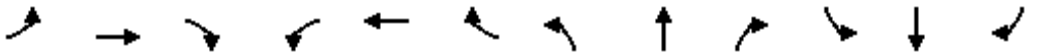
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	485	75	225	290	55	95	85	520	85	70	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3492		1752	1845	1568	1770	1863	1583	1787	1797	
Flt Permitted		0.87		0.16	1.00	1.00	0.68	1.00	1.00	0.69	1.00	
Satd. Flow (perm)		3050		304	1845	1568	1270	1863	1583	1302	1797	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	76	571	88	265	341	65	112	100	612	100	82	35
RTOR Reduction (vph)	0	11	0	0	0	32	0	0	330	0	21	0
Lane Group Flow (vph)	0	724	0	265	341	33	112	100	282	100	96	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)		20.3		34.7	34.7	34.7	21.5	17.0	17.0	21.5	17.0	
Effective Green, g (s)		22.8		34.7	37.2	37.2	21.5	19.5	19.5	21.5	19.5	
Actuated g/C Ratio		0.31		0.47	0.51	0.51	0.29	0.27	0.27	0.29	0.27	
Clearance Time (s)		6.5		4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.5	
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)		950		350	938	797	404	496	422	412	479	
v/s Ratio Prot				c0.11	0.18		c0.02	0.05		0.01	0.05	
v/s Ratio Perm		c0.24		0.25		0.02	0.06		c0.18	0.06		
v/c Ratio		0.76		0.76	0.36	0.04	0.28	0.20	0.67	0.24	0.20	
Uniform Delay, d1		22.8		14.0	10.9	9.0	19.5	20.8	24.0	19.3	20.8	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		3.7		9.0	0.2	0.0	0.4	0.2	4.0	0.3	0.2	
Delay (s)		26.4		23.0	11.1	9.1	19.9	21.0	27.9	19.6	21.0	
Level of Service		C		C	B	A	B	C	C	B	C	
Approach Delay (s)		26.4			15.6			26.0			20.4	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	73.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

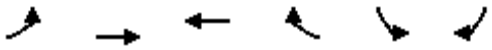
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	720	370	285	525	0	0	0	0	65	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		1827	1553	1719	1810						1787	1599
Flt Permitted		1.00	1.00	0.10	1.00						0.95	1.00
Satd. Flow (perm)		1827	1553	187	1810						1787	1599
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	867	446	343	633	0	0	0	0	78	0	54
RTOR Reduction (vph)	0	0	199	0	0	0	0	0	0	0	0	47
Lane Group Flow (vph)	0	867	247	343	633	0	0	0	0	0	78	7
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5	5 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		47.3	47.3	63.0	69.5						10.0	10.0
Effective Green, g (s)		49.8	49.8	64.0	64.0						12.0	12.0
Actuated g/C Ratio		0.55	0.55	0.71	0.71						0.13	0.13
Clearance Time (s)		6.5	6.5	4.5							6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0							3.0	3.0
Lane Grp Cap (vph)		1011	859	409	1287						238	213
v/s Ratio Prot		c0.47		c0.15	0.35							
v/s Ratio Perm			0.16	0.45							0.04	0.00
v/c Ratio		0.86	0.29	0.84	0.49						0.33	0.03
Uniform Delay, d1		17.1	10.7	27.6	5.8						35.3	34.0
Progression Factor		1.00	1.00	0.79	0.10						1.00	1.00
Incremental Delay, d2		9.4	0.8	10.2	0.2						0.8	0.1
Delay (s)		26.4	11.5	32.0	0.8						36.2	34.0
Level of Service		C	B	C	A						D	C
Approach Delay (s)		21.4			11.7			0.0			35.3	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	400	385	810	90	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1770	1863	1845	1568		
Flt Permitted	0.13	1.00	1.00	1.00		
Satd. Flow (perm)	233	1863	1845	1568		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	412	397	835	93	0	0
RTOR Reduction (vph)	0	0	0	42	0	0
Lane Group Flow (vph)	412	397	835	51	0	0
Heavy Vehicles (%)	2%	2%	3%	3%	1%	1%
Turn Type	D.P+P			Perm		
Protected Phases	4 12	2 4 12	2			
Permitted Phases	2			2		
Actuated Green, G (s)	77.5	90.0	47.3	47.3		
Effective Green, g (s)	78.5	84.5	49.8	49.8		
Actuated g/C Ratio	0.87	0.94	0.55	0.55		
Clearance Time (s)			6.5	6.5		
Vehicle Extension (s)			3.0	3.0		
Lane Grp Cap (vph)	728	1749	1021	868		
v/s Ratio Prot	c0.19	0.21	c0.45			
v/s Ratio Perm	0.30			0.03		
v/c Ratio	0.57	0.23	0.82	0.06		
Uniform Delay, d1	15.3	0.2	16.4	9.3		
Progression Factor	1.70	1.00	0.77	0.76		
Incremental Delay, d2	0.6	0.0	5.7	0.1		
Delay (s)	26.6	0.3	18.3	7.2		
Level of Service	C	A	B	A		
Approach Delay (s)		13.7	17.2		0.0	
Approach LOS		B	B		A	

Intersection Summary			
HCM Average Control Delay	15.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	385	0	0	770	130	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1863			1845	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1845	1770	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	453	0	0	906	153	53
RTOR Reduction (vph)	0	0	0	0	0	45
Lane Group Flow (vph)	453	0	0	906	153	8
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	66.0			66.0	12.0	12.0
Effective Green, g (s)	68.0			68.0	14.0	14.0
Actuated g/C Ratio	0.76			0.76	0.16	0.16
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)	1408			1394	275	246
v/s Ratio Prot	0.24			c0.49	c0.09	
v/s Ratio Perm						0.01
v/c Ratio	0.32			0.65	0.56	0.03
Uniform Delay, d1	3.6			5.3	35.1	32.3
Progression Factor	0.13			1.00	1.00	1.00
Incremental Delay, d2	0.6			2.4	2.4	0.1
Delay (s)	1.1			7.6	37.6	32.3
Level of Service	A			A	D	C
Approach Delay (s)	1.1			7.6	36.2	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.5%	ICU Level of Service	B
Analysis Period (min)	15		

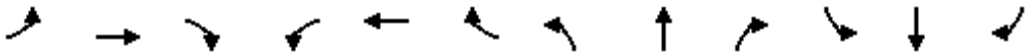
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	370	60	55	655	115	65
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	394	64	59	697	122	69
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						3
Median type	Raised			Raised		
Median storage veh)	2			2		
Upstream signal (ft)	456					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			457		1239	426
vC1, stage 1 conf vol					426	
vC2, stage 2 conf vol					814	
vCu, unblocked vol			383		1221	349
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			95		67	89
cM capacity (veh/h)			1102		371	648

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	457	59	697	191
Volume Left	0	59	0	122
Volume Right	64	0	0	69
cSH	1700	1102	1700	581
Volume to Capacity	0.27	0.05	0.41	0.33
Queue Length 95th (ft)	0	4	0	36
Control Delay (s)	0.0	8.4	0.0	16.4
Lane LOS		A		C
Approach Delay (s)	0.0	0.7		16.4
Approach LOS				C

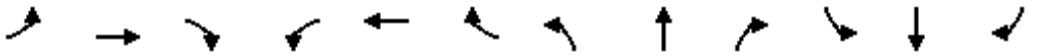
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	47.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	485	75	225	290	55	95	85	520	85	70	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3492		1752	1845	1568	1770	1863	1583	1787	1797	
Flt Permitted		0.87		0.16	1.00	1.00	0.68	1.00	1.00	0.69	1.00	
Satd. Flow (perm)		3050		304	1845	1568	1270	1863	1583	1302	1797	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	76	571	88	265	341	65	112	100	612	100	82	35
RTOR Reduction (vph)	0	11	0	0	0	32	0	0	330	0	21	0
Lane Group Flow (vph)	0	724	0	265	341	33	112	100	282	100	96	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)		20.3		34.7	34.7	34.7	21.5	17.0	17.0	21.5	17.0	
Effective Green, g (s)		22.8		34.7	37.2	37.2	21.5	19.5	19.5	21.5	19.5	
Actuated g/C Ratio		0.31		0.47	0.51	0.51	0.29	0.27	0.27	0.29	0.27	
Clearance Time (s)		6.5		4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.5	
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)		950		350	938	797	404	496	422	412	479	
v/s Ratio Prot				c0.11	0.18		c0.02	0.05		0.01	0.05	
v/s Ratio Perm		c0.24		0.25		0.02	0.06		c0.18	0.06		
v/c Ratio		0.76		0.76	0.36	0.04	0.28	0.20	0.67	0.24	0.20	
Uniform Delay, d1		22.8		14.0	10.9	9.0	19.5	20.8	24.0	19.3	20.8	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		3.7		9.0	0.2	0.0	0.4	0.2	4.0	0.3	0.2	
Delay (s)		26.4		23.0	11.1	9.1	19.9	21.0	27.9	19.6	21.0	
Level of Service		C		C	B	A	B	C	C	B	C	
Approach Delay (s)		26.4			15.6			26.0			20.4	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	73.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

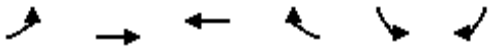
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	761	182	239	983	0	0	0	0	80	0	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		1792	1524	1719	1810						1656	1482
Flt Permitted		1.00	1.00	0.08	1.00						0.95	1.00
Satd. Flow (perm)		1792	1524	142	1810						1656	1482
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	976	233	306	1260	0	0	0	0	103	0	374
RTOR Reduction (vph)	0	0	99	0	0	0	0	0	0	0	0	116
Lane Group Flow (vph)	0	976	134	306	1260	0	0	0	0	0	103	258
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	1%	1%	1%	9%	9%	9%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5	5 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		50.5	50.5	68.0	72.5						10.0	10.0
Effective Green, g (s)		53.0	53.0	69.0	73.0						12.0	12.0
Actuated g/C Ratio		0.56	0.56	0.73	0.77						0.13	0.13
Clearance Time (s)		6.5	6.5	4.5							6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0							3.0	3.0
Lane Grp Cap (vph)		1000	850	402	1391						209	187
v/s Ratio Prot		c0.54		0.14	c0.70							
v/s Ratio Perm			0.09	0.41							0.06	c0.17
v/c Ratio		0.98	0.16	0.76	0.91						0.49	1.38
Uniform Delay, d1		20.4	10.2	27.3	8.4						38.7	41.5
Progression Factor		1.00	1.00	1.50	0.43						1.00	1.00
Incremental Delay, d2		23.2	0.4	0.8	0.9						1.8	200.2
Delay (s)		43.6	10.6	41.8	4.5						40.5	241.7
Level of Service		D	B	D	A						D	F
Approach Delay (s)		37.2			11.8			0.0			198.3	
Approach LOS		D			B			A			F	

Intersection Summary			
HCM Average Control Delay	48.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	433	403	1226	109	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1736	1827	1863	1583		
Flt Permitted	0.07	1.00	1.00	1.00		
Satd. Flow (perm)	119	1827	1863	1583		
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	528	491	1495	133	0	0
RTOR Reduction (vph)	0	0	0	33	0	0
Lane Group Flow (vph)	528	491	1495	100	0	0
Heavy Vehicles (%)	4%	4%	2%	2%	1%	1%
Turn Type	D.P+P			Perm		
Protected Phases	4 12	2 4 12	2			
Permitted Phases	2			2		
Actuated Green, G (s)	82.5	95.0	61.0	61.0		
Effective Green, g (s)	83.5	89.5	63.5	63.5		
Actuated g/C Ratio	0.88	0.94	0.67	0.67		
Clearance Time (s)			6.5	6.5		
Vehicle Extension (s)			3.0	3.0		
Lane Grp Cap (vph)	479	1721	1245	1058		
v/s Ratio Prot	c0.26	0.27	c0.80			
v/s Ratio Perm	0.71			0.06		
v/c Ratio	1.10	0.29	1.20	0.09		
Uniform Delay, d1	32.6	0.2	15.8	5.6		
Progression Factor	0.66	1.00	0.81	1.00		
Incremental Delay, d2	57.7	0.0	93.0	0.1		
Delay (s)	79.1	0.3	105.8	5.6		
Level of Service	E	A	F	A		
Approach Delay (s)		41.1	97.6		0.0	
Approach LOS		D	F		A	

Intersection Summary			
HCM Average Control Delay	75.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	402	0	0	1149	216	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1845			1881	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1845			1881	1770	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	479	0	0	1368	257	106
RTOR Reduction (vph)	0	0	0	0	0	87
Lane Group Flow (vph)	479	0	0	1368	257	19
Heavy Vehicles (%)	3%	3%	1%	1%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	68.3			68.3	14.7	14.7
Effective Green, g (s)	70.3			70.3	16.7	16.7
Actuated g/C Ratio	0.74			0.74	0.18	0.18
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)	1365			1392	311	278
v/s Ratio Prot	0.26			c0.73	c0.15	
v/s Ratio Perm						0.01
v/c Ratio	0.35			0.98	0.83	0.07
Uniform Delay, d1	4.3			11.8	37.8	32.7
Progression Factor	1.87			1.00	1.00	1.00
Incremental Delay, d2	0.7			20.3	16.2	0.1
Delay (s)	8.8			32.1	54.0	32.8
Level of Service	A			C	D	C
Approach Delay (s)	8.8			32.1	47.8	
Approach LOS	A			C	D	

Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

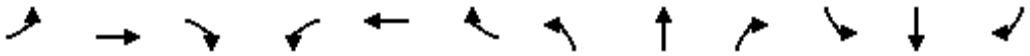
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	432	55	108	1043	104	47
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	514	65	129	1242	124	56
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						3
Median type	Raised			Raised		
Median storage veh)	2			2		
Upstream signal (ft)	456					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			580		2046	547
vC1, stage 1 conf vol					547	
vC2, stage 2 conf vol					1499	
vCu, unblocked vol			486		2101	450
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			87		25	90
cM capacity (veh/h)			982		165	549

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	580	129	1242	180
Volume Left	0	129	0	124
Volume Right	65	0	0	56
cSH	1700	982	1700	233
Volume to Capacity	0.34	0.13	0.73	0.77
Queue Length 95th (ft)	0	11	0	138
Control Delay (s)	0.0	9.2	0.0	58.5
Lane LOS		A		F
Approach Delay (s)	0.0	0.9		58.5
Approach LOS				F

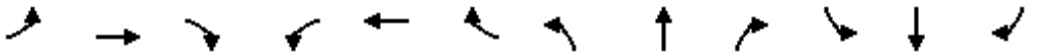
Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	502	139	655	685	41	69	83	324	85	71	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.92	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2983		1504	1583	1346	1770	1863	1583	1787	1738	
Flt Permitted		0.87		0.13	1.00	1.00	0.48	1.00	1.00	0.59	1.00	
Satd. Flow (perm)		2606		204	1583	1346	886	1863	1583	1107	1738	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	39	598	165	780	815	49	82	99	386	101	85	88
RTOR Reduction (vph)	0	18	0	0	0	16	0	0	324	0	36	0
Lane Group Flow (vph)	0	784	0	780	815	33	82	99	62	101	137	0
Heavy Vehicles (%)	17%	17%	17%	20%	20%	20%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)		27.1		65.1	65.1	65.1	18.5	13.8	13.8	21.1	15.1	
Effective Green, g (s)		29.6		65.1	67.6	67.6	18.5	16.3	16.3	21.1	17.6	
Actuated g/C Ratio		0.29		0.64	0.66	0.66	0.18	0.16	0.16	0.21	0.17	
Clearance Time (s)		6.5		4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.5	
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)		757		564	1050	893	202	298	253	269	300	
v/s Ratio Prot				c0.46	0.51		0.02	0.05		c0.02	c0.08	
v/s Ratio Perm		0.30		c0.42		0.02	0.06		0.04	0.06		
v/c Ratio		1.04		1.38	0.78	0.04	0.41	0.33	0.24	0.38	0.46	
Uniform Delay, d1		36.2		27.5	11.9	5.9	35.9	38.0	37.4	34.0	37.8	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		42.1		183.2	3.7	0.0	1.3	0.7	0.5	0.9	1.1	
Delay (s)		78.2		210.7	15.6	5.9	37.2	38.6	37.9	34.9	38.9	
Level of Service		E		F	B	A	D	D	D	C	D	
Approach Delay (s)		78.2			107.9			37.9			37.4	
Approach LOS		E			F			D			D	

Intersection Summary			
HCM Average Control Delay	82.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	101.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

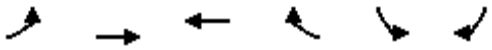
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1206	428	297	708	0	0	0	0	98	0	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		1827	1553	1719	1810						1787	1599
Flt Permitted		1.00	1.00	0.09	1.00						0.95	1.00
Satd. Flow (perm)		1827	1553	154	1810						1787	1599
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	1453	516	358	853	0	0	0	0	118	0	166
RTOR Reduction (vph)	0	0	156	0	0	0	0	0	0	0	0	144
Lane Group Flow (vph)	0	1453	360	358	853	0	0	0	0	0	118	22
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5	5 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		46.5	46.5	63.0	69.5						10.0	10.0
Effective Green, g (s)		49.0	49.0	64.0	64.0						12.0	12.0
Actuated g/C Ratio		0.54	0.54	0.71	0.71						0.13	0.13
Clearance Time (s)		6.5	6.5	4.5							6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0							3.0	3.0
Lane Grp Cap (vph)		995	846	405	1287						238	213
v/s Ratio Prot		c0.80		c0.17	0.47							
v/s Ratio Perm			0.23	0.46							0.07	0.01
v/c Ratio		1.46	0.43	0.88	0.66						0.50	0.10
Uniform Delay, d1		20.5	12.2	32.1	7.1						36.2	34.3
Progression Factor		1.00	1.00	0.74	0.12						1.00	1.00
Incremental Delay, d2		212.7	1.6	10.6	0.6						1.6	0.2
Delay (s)		233.2	13.7	34.1	1.5						37.8	34.5
Level of Service		F	B	C	A						D	C
Approach Delay (s)		175.7			11.1			0.0			35.9	
Approach LOS		F			B			A			D	

Intersection Summary			
HCM Average Control Delay	106.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	713	596	998	139	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1770	1863	1845	1568		
Flt Permitted	0.09	1.00	1.00	1.00		
Satd. Flow (perm)	159	1863	1845	1568		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	735	614	1029	143	0	0
RTOR Reduction (vph)	0	0	0	48	0	0
Lane Group Flow (vph)	735	614	1029	95	0	0
Heavy Vehicles (%)	2%	2%	3%	3%	1%	1%
Turn Type	D.P+P			Perm		
Protected Phases	4 12	2 4 12	2			
Permitted Phases	2			2		
Actuated Green, G (s)	77.5	90.0	46.5	46.5		
Effective Green, g (s)	78.5	84.5	49.0	49.0		
Actuated g/C Ratio	0.87	0.94	0.54	0.54		
Clearance Time (s)			6.5	6.5		
Vehicle Extension (s)			3.0	3.0		
Lane Grp Cap (vph)	703	1749	1005	854		
v/s Ratio Prot	c0.37	0.33	c0.56			
v/s Ratio Perm	0.55			0.06		
v/c Ratio	1.05	0.35	1.02	0.11		
Uniform Delay, d1	25.8	0.3	20.5	9.9		
Progression Factor	1.31	1.00	0.85	1.07		
Incremental Delay, d2	24.8	0.0	27.8	0.2		
Delay (s)	58.7	0.3	45.3	10.8		
Level of Service	E	A	D	B		
Approach Delay (s)		32.1	41.1		0.0	
Approach LOS		C	D		A	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	596	0	0	952	186	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1863			1845	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1845	1770	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	701	0	0	1120	219	121
RTOR Reduction (vph)	0	0	0	0	0	101
Lane Group Flow (vph)	701	0	0	1120	219	20
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	65.4			65.4	12.6	12.6
Effective Green, g (s)	67.4			67.4	14.6	14.6
Actuated g/C Ratio	0.75			0.75	0.16	0.16
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)	1395			1382	287	257
v/s Ratio Prot	0.38			c0.61	c0.12	
v/s Ratio Perm						0.01
v/c Ratio	0.50			0.81	0.76	0.08
Uniform Delay, d1	4.5			7.2	36.0	32.0
Progression Factor	0.12			1.00	1.00	1.00
Incremental Delay, d2	1.3			5.2	11.4	0.1
Delay (s)	1.8			12.5	47.4	32.1
Level of Service	A			B	D	C
Approach Delay (s)	1.8			12.5	42.0	
Approach LOS	A			B	D	

Intersection Summary			
HCM Average Control Delay	13.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

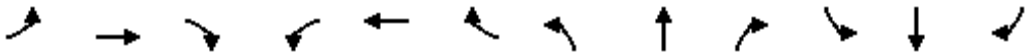
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	588	67	64	835	120	209
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	626	71	68	888	128	222
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						3
Median type	Raised			Raised		
Median storage veh)	2			2		
Upstream signal (ft)	456					
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			697		1686	661
vC1, stage 1 conf vol					661	
vC2, stage 2 conf vol					1024	
vCu, unblocked vol			560		1717	518
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			92		53	53
cM capacity (veh/h)			868		272	476

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	697	68	888	350
Volume Left	0	68	0	128
Volume Right	71	0	0	222
cSH	1700	868	1700	747
Volume to Capacity	0.41	0.08	0.52	0.47
Queue Length 95th (ft)	0	6	0	63
Control Delay (s)	0.0	9.5	0.0	22.8
Lane LOS		A		C
Approach Delay (s)	0.0	0.7		22.8
Approach LOS				C

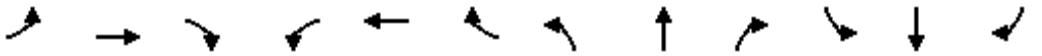
Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	120	753	93	369	413	78	118	166	775	93	83	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3501		1752	1845	1568	1770	1863	1583	1787	1797	
Flt Permitted		0.79		0.16	1.00	1.00	0.63	1.00	1.00	0.61	1.00	
Satd. Flow (perm)		2793		294	1845	1568	1167	1863	1583	1144	1797	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	141	886	109	434	486	92	139	195	912	109	98	42
RTOR Reduction (vph)	0	9	0	0	0	53	0	0	253	0	18	0
Lane Group Flow (vph)	0	1127	0	434	486	39	139	195	659	109	122	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)		21.1		35.1	35.1	35.1	38.1	32.1	32.1	35.5	30.8	
Effective Green, g (s)		23.6		35.1	37.6	37.6	38.1	34.6	34.6	35.5	33.3	
Actuated g/C Ratio		0.27		0.39	0.42	0.42	0.43	0.39	0.39	0.40	0.37	
Clearance Time (s)		6.5		4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.5	
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)		741		280	780	663	541	725	616	491	673	
v/s Ratio Prot				c0.17	0.26		c0.02	0.10		0.01	0.07	
v/s Ratio Perm		0.40		c0.44		0.02	0.09		c0.42	0.08		
v/c Ratio		1.52		1.55	0.62	0.06	0.26	0.27	1.07	0.22	0.18	
Uniform Delay, d1		32.7		22.7	20.1	15.2	15.8	18.5	27.2	17.1	18.7	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		241.4		264.5	1.6	0.0	0.3	0.2	56.4	0.2	0.1	
Delay (s)		274.1		287.1	21.7	15.2	16.0	18.7	83.6	17.3	18.8	
Level of Service		F		F	C	B	B	B	F	B	B	
Approach Delay (s)		274.1			134.9			65.9			18.1	
Approach LOS		F			F			E			B	

Intersection Summary			
HCM Average Control Delay	146.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	88.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		

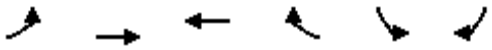
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	865	204	257	938	0	0	0	0	86	0	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		1792	1524	1719	1810						1656	1482
Flt Permitted		1.00	1.00	0.07	1.00						0.95	1.00
Satd. Flow (perm)		1792	1524	123	1810						1656	1482
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	0	1109	262	329	1203	0	0	0	0	110	0	422
RTOR Reduction (vph)	0	0	94	0	0	0	0	0	0	0	0	133
Lane Group Flow (vph)	0	1109	168	329	1203	0	0	0	0	0	110	289
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	1%	1%	1%	9%	9%	9%
Turn Type			Perm	pm+pt						Perm		Perm
Protected Phases		16		5	5 16						6	
Permitted Phases			16	5 16						6		6
Actuated Green, G (s)		58.3	58.3	73.0	77.5						10.0	10.0
Effective Green, g (s)		60.8	60.8	74.0	78.0						12.0	12.0
Actuated g/C Ratio		0.61	0.61	0.74	0.78						0.12	0.12
Clearance Time (s)		6.5	6.5	4.5							6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0							3.0	3.0
Lane Grp Cap (vph)		1090	927	334	1412						199	178
v/s Ratio Prot		c0.62		c0.15	c0.66							
v/s Ratio Perm			0.11	0.58							0.07	c0.20
v/c Ratio		1.02	0.18	0.99	0.85						0.55	1.62
Uniform Delay, d1		19.6	8.6	34.5	7.2						41.5	44.0
Progression Factor		1.00	1.00	1.29	1.36						1.00	1.00
Incremental Delay, d2		31.7	0.4	11.4	0.5						3.3	305.1
Delay (s)		51.3	9.1	56.0	10.3						44.8	349.1
Level of Service		D	A	E	B						D	F
Approach Delay (s)		43.2			20.1			0.0			286.2	
Approach LOS		D			C			A			F	

Intersection Summary			
HCM Average Control Delay	70.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	436	459	1165	114	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1736	1827	1863	1583		
Flt Permitted	0.06	1.00	1.00	1.00		
Satd. Flow (perm)	108	1827	1863	1583		
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	532	560	1421	139	0	0
RTOR Reduction (vph)	0	0	0	57	0	0
Lane Group Flow (vph)	532	560	1421	82	0	0
Heavy Vehicles (%)	4%	4%	2%	2%	1%	1%
Turn Type	pm+pt			Perm		
Protected Phases	4	2 4 12	2			
Permitted Phases	2 4 12			2		
Actuated Green, G (s)	89.5	100.0	56.5	56.5		
Effective Green, g (s)	84.5	94.5	59.0	59.0		
Actuated g/C Ratio	0.84	0.94	0.59	0.59		
Clearance Time (s)	4.5		6.5	6.5		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	368	1727	1099	934		
v/s Ratio Prot	c0.25	0.31	0.76			
v/s Ratio Perm	c0.97			0.05		
v/c Ratio	1.45	0.32	1.29	0.09		
Uniform Delay, d1	36.3	0.2	20.5	8.9		
Progression Factor	1.37	1.00	0.90	0.46		
Incremental Delay, d2	202.0	0.0	134.5	0.1		
Delay (s)	251.7	0.3	153.0	4.2		
Level of Service	F	A	F	A		
Approach Delay (s)		122.7	139.7		0.0	
Approach LOS		F	F		A	

Intersection Summary			
HCM Average Control Delay	132.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	459	0	0	1086	243	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1845			1881	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1845			1881	1770	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	546	0	0	1293	289	119
RTOR Reduction (vph)	0	0	0	0	0	98
Lane Group Flow (vph)	546	0	0	1293	289	21
Heavy Vehicles (%)	3%	3%	1%	1%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	72.0			72.0	16.0	16.0
Effective Green, g (s)	74.0			74.0	18.0	18.0
Actuated g/C Ratio	0.74			0.74	0.18	0.18
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)	1365			1392	319	285
v/s Ratio Prot	0.30			c0.69	c0.16	
v/s Ratio Perm						0.01
v/c Ratio	0.40			0.93	0.91	0.08
Uniform Delay, d1	4.8			10.8	40.2	34.1
Progression Factor	1.36			1.00	1.00	1.00
Incremental Delay, d2	0.8			12.2	27.6	0.1
Delay (s)	7.4			23.0	67.8	34.2
Level of Service	A			C	E	C
Approach Delay (s)	7.4			23.0	58.0	
Approach LOS	A			C	E	

Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

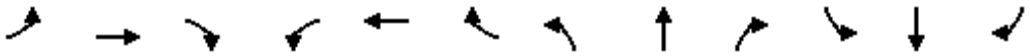
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	475	116	211	959	128	71
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	565	138	251	1142	152	85
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						3
Median type	Raised			Raised		
Median storage veh)	2			2		
Upstream signal (ft)	456					
pX, platoon unblocked			0.88		0.88	0.88
vC, conflicting volume			704		2279	635
vC1, stage 1 conf vol					635	
vC2, stage 2 conf vol					1644	
vCu, unblocked vol			599		2381	520
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			71		0	83
cM capacity (veh/h)			869		116	488

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	704	251	1142	237
Volume Left	0	251	0	152
Volume Right	138	0	0	85
cSH	1700	869	1700	164
Volume to Capacity	0.41	0.29	0.67	1.44
Queue Length 95th (ft)	0	30	0	375
Control Delay (s)	0.0	10.8	0.0	281.8
Lane LOS		B		F
Approach Delay (s)	0.0	2.0		281.8
Approach LOS				F

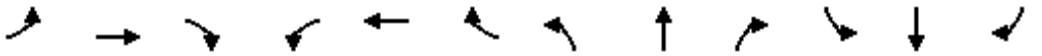
Intersection Summary			
Average Delay	29.8		
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	552	185	709	636	56	93	123	392	125	359	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2967		1504	1583	1346	1770	1863	1583	1787	1794	
Flt Permitted		0.84		0.12	1.00	1.00	0.12	1.00	1.00	0.59	1.00	
Satd. Flow (perm)		2495		198	1583	1346	233	1863	1583	1111	1794	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	58	657	220	844	757	67	111	146	467	149	427	190
RTOR Reduction (vph)	0	25	0	0	0	29	0	0	288	0	14	0
Lane Group Flow (vph)	0	910	0	844	757	38	111	146	179	149	603	0
Heavy Vehicles (%)	17%	17%	17%	20%	20%	20%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)		28.0		65.0	65.0	65.0	38.0	32.0	32.0	38.0	32.0	
Effective Green, g (s)		30.5		65.0	67.5	67.5	38.0	34.5	34.5	38.0	34.5	
Actuated g/C Ratio		0.25		0.54	0.56	0.56	0.32	0.29	0.29	0.32	0.29	
Clearance Time (s)		6.5		4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.5	
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)		634		466	890	757	151	536	455	386	516	
v/s Ratio Prot				c0.50	0.48		c0.04	0.08		0.02	c0.34	
v/s Ratio Perm		0.36		c0.48		0.03	0.20		0.11	0.10		
v/c Ratio		1.44		1.81	0.85	0.05	0.74	0.27	0.39	0.39	1.17	
Uniform Delay, d1		44.8		35.2	22.0	11.8	33.4	33.0	34.3	31.2	42.8	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		205.1		373.5	7.8	0.0	16.9	0.3	0.6	0.6	95.5	
Delay (s)		249.9		408.6	29.9	11.8	50.2	33.3	34.9	31.9	138.2	
Level of Service		F		F	C	B	D	C	C	C	F	
Approach Delay (s)		249.9			220.8			36.9			117.6	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM Average Control Delay	175.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.0%	ICU Level of Service	G
Analysis Period (min)	15		

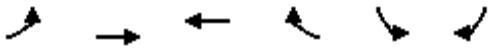
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1426	482	335	869	0	0	0	0	71	0	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		1827	1553	1719	1810						1787	1599
Flt Permitted		1.00	1.00	0.07	1.00						0.95	1.00
Satd. Flow (perm)		1827	1553	119	1810						1787	1599
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	1718	581	404	1047	0	0	0	0	86	0	208
RTOR Reduction (vph)	0	0	134	0	0	0	0	0	0	0	0	173
Lane Group Flow (vph)	0	1718	447	404	1047	0	0	0	0	0	86	35
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Perm
Protected Phases		16		5	5 16						6	
Permitted Phases			16	5 16						6		6
Actuated Green, G (s)		60.5	60.5	73.0	77.5						10.0	10.0
Effective Green, g (s)		63.0	63.0	74.0	78.0						12.0	12.0
Actuated g/C Ratio		0.63	0.63	0.74	0.78						0.12	0.12
Clearance Time (s)		6.5	6.5	4.5							6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0							3.0	3.0
Lane Grp Cap (vph)		1151	978	296	1412						214	192
v/s Ratio Prot		c0.94		c0.18	0.58							
v/s Ratio Perm			0.29	0.83							0.05	0.02
v/c Ratio		1.49	0.46	1.36	0.74						0.40	0.18
Uniform Delay, d1		18.5	9.6	35.1	5.7						40.7	39.6
Progression Factor		1.00	1.00	1.65	0.86						1.00	1.00
Incremental Delay, d2		226.3	1.5	166.2	0.2						1.2	0.5
Delay (s)		244.8	11.2	224.2	5.1						41.9	40.0
Level of Service		F	B	F	A						D	D
Approach Delay (s)		185.8			66.1			0.0			40.6	
Approach LOS		F			E			A			D	

Intersection Summary			
HCM Average Control Delay	132.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	804	786	1085	157	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	1.00	1.00	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1770	1863	1845	1568		
Flt Permitted	0.08	1.00	1.00	1.00		
Satd. Flow (perm)	142	1863	1845	1568		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	829	810	1119	162	0	0
RTOR Reduction (vph)	0	0	0	91	0	0
Lane Group Flow (vph)	829	810	1119	71	0	0
Heavy Vehicles (%)	2%	2%	3%	3%	1%	1%
Turn Type	pm+pt			Perm		
Protected Phases	4	2 4 12	2			
Permitted Phases	2 4 12			2		
Actuated Green, G (s)	89.0	100.0	41.5	41.5		
Effective Green, g (s)	84.5	94.5	44.0	44.0		
Actuated g/C Ratio	0.84	0.94	0.44	0.44		
Clearance Time (s)	4.5		6.5	6.5		
Vehicle Extension (s)	3.0		3.0	3.0		
Lane Grp Cap (vph)	641	1761	812	690		
v/s Ratio Prot	c0.41	0.43	c0.61			
v/s Ratio Perm	c0.68			0.05		
v/c Ratio	1.29	0.46	1.38	0.10		
Uniform Delay, d1	29.8	0.3	28.0	16.4		
Progression Factor	0.61	1.00	0.95	1.42		
Incremental Delay, d2	133.1	0.0	174.0	0.1		
Delay (s)	151.4	0.3	200.7	23.4		
Level of Service	F	A	F	C		
Approach Delay (s)		76.7	178.3		0.0	
Approach LOS		E	F		A	

Intersection Summary			
HCM Average Control Delay	121.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	111.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	786	0	0	1023	210	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	1863			1845	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1845	1770	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	925	0	0	1204	247	136
RTOR Reduction (vph)	0	0	0	0	0	112
Lane Group Flow (vph)	925	0	0	1204	247	24
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Turn Type						Perm
Protected Phases	2			6	3	
Permitted Phases						3
Actuated Green, G (s)	72.6			72.6	15.4	15.4
Effective Green, g (s)	74.6			74.6	17.4	17.4
Actuated g/C Ratio	0.75			0.75	0.17	0.17
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)	1390			1376	308	275
v/s Ratio Prot	0.50			c0.65	c0.14	
v/s Ratio Perm						0.01
v/c Ratio	0.67			0.88	0.80	0.09
Uniform Delay, d1	6.4			9.3	39.6	34.6
Progression Factor	1.34			1.00	1.00	1.00
Incremental Delay, d2	2.4			8.0	13.9	0.1
Delay (s)	11.0			17.3	53.6	34.8
Level of Service	B			B	D	C
Approach Delay (s)	11.0			17.3	46.9	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

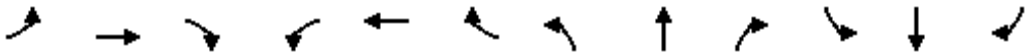
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	738	139	122	850	175	223
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	785	148	130	904	186	237
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						3
Median type	Raised			Raised		
Median storage veh)	2			2		
Upstream signal (ft)	456					
pX, platoon unblocked			0.73		0.73	0.73
vC, conflicting volume			933		2023	859
vC1, stage 1 conf vol					859	
vC2, stage 2 conf vol					1164	
vCu, unblocked vol			724		2215	623
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			80		5	33
cM capacity (veh/h)			645		196	355

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	933	130	904	423
Volume Left	0	130	0	186
Volume Right	148	0	0	237
cSH	1700	645	1700	354
Volume to Capacity	0.55	0.20	0.53	1.20
Queue Length 95th (ft)	0	19	0	442
Control Delay (s)	0.0	12.0	0.0	145.6
Lane LOS		B		F
Approach Delay (s)	0.0	1.5		145.6
Approach LOS				F

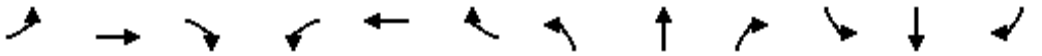
Intersection Summary			
Average Delay	26.4		
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	878	207	466	475	99	147	346	890	105	171	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected		0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3463		1752	1845	1568	1770	1863	1583	1787	1818	
Flt Permitted		0.75		0.10	1.00	1.00	0.42	1.00	1.00	0.31	1.00	
Satd. Flow (perm)		2600		182	1845	1568	776	1863	1583	576	1818	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	187	1033	244	548	559	116	173	407	1047	124	201	58
RTOR Reduction (vph)	0	14	0	0	0	59	0	0	223	0	9	0
Lane Group Flow (vph)	0	1450	0	548	559	57	173	407	824	124	250	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases		2		1	6		3	8		7	4	
Permitted Phases	2			6		6	8		8	4		
Actuated Green, G (s)		36.5		56.5	56.5	56.5	49.4	40.5	40.5	43.6	37.6	
Effective Green, g (s)		39.0		56.5	59.0	59.0	49.4	43.0	43.0	43.6	40.1	
Actuated g/C Ratio		0.32		0.47	0.49	0.49	0.41	0.36	0.36	0.36	0.33	
Clearance Time (s)		6.5		4.0	6.5	6.5	4.0	6.5	6.5	4.0	6.5	
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)		845		295	907	771	393	668	567	270	608	
v/s Ratio Prot				c0.25	0.30		c0.03	0.22		0.02	0.14	
v/s Ratio Perm		0.56		c0.63		0.04	0.15		c0.52	0.14		
v/c Ratio		1.72		1.86	0.62	0.07	0.44	0.61	1.45	0.46	0.41	
Uniform Delay, d1		40.5		36.7	22.2	16.1	23.8	31.6	38.5	27.3	30.8	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		327.1		398.7	1.3	0.0	0.8	1.6	213.5	1.2	0.5	
Delay (s)		367.6		435.4	23.5	16.1	24.6	33.2	252.0	28.5	31.3	
Level of Service		F		F	C	B	C	C	F	C	C	
Approach Delay (s)		367.6			207.4			173.0			30.4	
Approach LOS		F			F			F			C	

Intersection Summary			
HCM Average Control Delay	231.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		

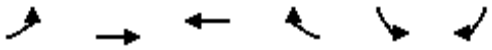
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1426	482	335	869	0	0	0	0	71	0	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	2.0
Lane Util. Factor		0.91	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		4988	1553	1719	3438						1787	1599
Flt Permitted		1.00	1.00	0.07	1.00						0.95	1.00
Satd. Flow (perm)		4988	1553	134	3438						1787	1599
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	1718	581	404	1047	0	0	0	0	86	0	208
RTOR Reduction (vph)	0	0	218	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1718	363	404	1047	0	0	0	0	0	86	208
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	pm+pt						Perm		Free
Protected Phases		16		5	5 16						6	
Permitted Phases			16	5 16						6		Free
Actuated Green, G (s)		53.7	53.7	83.0	87.5						10.0	110.0
Effective Green, g (s)		56.2	56.2	84.0	88.0						12.0	110.0
Actuated g/C Ratio		0.51	0.51	0.76	0.80						0.11	1.00
Clearance Time (s)		6.5	6.5	4.5							6.0	
Vehicle Extension (s)		3.0	3.0	3.0							3.0	
Lane Grp Cap (vph)		2548	793	532	2750						195	1599
v/s Ratio Prot		0.34		c0.21	c0.30							
v/s Ratio Perm			0.23	c0.38							0.05	0.13
v/c Ratio		0.67	0.46	0.76	0.38						0.44	0.13
Uniform Delay, d1		20.1	17.2	28.0	3.2						45.9	0.0
Progression Factor		0.47	0.00	0.34	0.64						1.00	1.00
Incremental Delay, d2		0.9	1.2	5.3	0.1						1.6	0.2
Delay (s)		10.4	1.3	14.8	2.1						47.5	0.2
Level of Service		B	A	B	A						D	A
Approach Delay (s)		8.1			5.6			0.0			14.0	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	804	786	1085	157	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	1.00	0.95	0.91	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1770	3539	5036	1568		
Flt Permitted	0.12	1.00	1.00	1.00		
Satd. Flow (perm)	227	3539	5036	1568		
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	829	810	1119	162	0	0
RTOR Reduction (vph)	0	0	0	90	0	0
Lane Group Flow (vph)	829	810	1119	72	0	0
Heavy Vehicles (%)	2%	2%	3%	3%	1%	1%
Turn Type	pm+pt			Perm		
Protected Phases	4 12	2 4 12	2			
Permitted Phases	2 4 12	2 4 12		2		
Actuated Green, G (s)	97.5	110.0	32.3	32.3		
Effective Green, g (s)	98.5	104.5	34.8	34.8		
Actuated g/C Ratio	0.90	0.95	0.32	0.32		
Clearance Time (s)			6.5	6.5		
Vehicle Extension (s)			3.0	3.0		
Lane Grp Cap (vph)	1125	3362	1593	496		
v/s Ratio Prot	c0.44	0.23	c0.22			
v/s Ratio Perm	c0.22			0.05		
v/c Ratio	0.74	0.24	0.70	0.14		
Uniform Delay, d1	12.4	0.2	33.0	26.9		
Progression Factor	0.49	1.00	1.02	1.05		
Incremental Delay, d2	1.9	0.0	2.4	0.6		
Delay (s)	8.0	0.2	36.3	28.9		
Level of Service	A	A	D	C		
Approach Delay (s)		4.1	35.3		0.0	
Approach LOS		A	D		A	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	786	0	0	1023	210	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5			4.5	2.0	2.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3505	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3505	1770	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	925	0	0	1204	247	136
RTOR Reduction (vph)	0	0	0	0	0	108
Lane Group Flow (vph)	925	0	0	1204	247	28
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Turn Type						Perm
Protected Phases	3 10			3 10	9	
Permitted Phases						9
Actuated Green, G (s)	78.8			78.8	20.7	20.7
Effective Green, g (s)	76.8			76.8	22.7	22.7
Actuated g/C Ratio	0.70			0.70	0.21	0.21
Clearance Time (s)					4.0	4.0
Vehicle Extension (s)					3.0	3.0
Lane Grp Cap (vph)	2471			2447	365	327
v/s Ratio Prot	0.26			c0.34	c0.14	
v/s Ratio Perm						0.02
v/c Ratio	0.37			0.49	0.68	0.09
Uniform Delay, d1	6.8			7.6	40.3	35.3
Progression Factor	0.50			0.79	1.00	1.00
Incremental Delay, d2	0.1			0.2	4.9	0.1
Delay (s)	3.5			6.1	45.2	35.4
Level of Service	A			A	D	D
Approach Delay (s)	3.5			6.1	41.7	
Approach LOS	A			A	D	

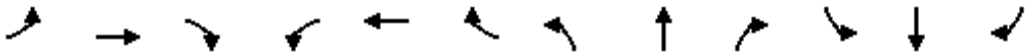
Intersection Summary			
HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	738	139	122	850	175	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	3.5	6.0	5.0	5.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3574	1599	1787	3574	1770	1583
Flt Permitted	1.00	1.00	0.31	1.00	0.95	1.00
Satd. Flow (perm)	3574	1599	582	3574	1770	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	785	148	130	904	186	237
RTOR Reduction (vph)	0	54	0	0	0	200
Lane Group Flow (vph)	785	94	130	904	186	37
Heavy Vehicles (%)	1%	1%	1%	1%	2%	2%
Turn Type		Perm	pm+pt			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4	8			2
Actuated Green, G (s)	70.1	70.1	82.0	82.0	17.0	17.0
Effective Green, g (s)	70.1	70.1	82.0	82.0	17.0	17.0
Actuated g/C Ratio	0.64	0.64	0.75	0.75	0.15	0.15
Clearance Time (s)	6.0	6.0	3.5	6.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2278	1019	526	2664	274	245
v/s Ratio Prot	0.22		0.02	c0.25	c0.11	
v/s Ratio Perm		0.06	0.17			0.02
v/c Ratio	0.34	0.09	0.25	0.34	0.68	0.15
Uniform Delay, d1	9.3	7.7	4.3	4.8	43.9	40.2
Progression Factor	0.25	0.09	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2	0.2	0.3	6.5	0.3
Delay (s)	2.7	0.9	4.6	5.1	50.5	40.5
Level of Service	A	A	A	A	D	D
Approach Delay (s)	2.4			5.1	44.9	
Approach LOS	A			A	D	

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

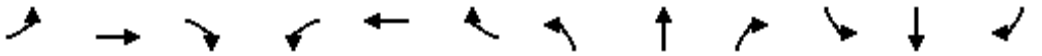
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	878	207	466	475	99	147	346	890	105	171	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	1.5	4.0	6.5	6.0	4.0	4.0	4.0	4.0	1.5	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	3400	3505	1568	1770	1863	1583	1787	3454	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.47	1.00	1.00	0.18	1.00	
Satd. Flow (perm)	1787	3574	1599	3400	3505	1568	874	1863	1583	342	3454	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	187	1033	244	548	559	116	173	407	1047	124	201	58
RTOR Reduction (vph)	0	0	129	0	0	60	0	0	0	0	26	0
Lane Group Flow (vph)	187	1033	115	548	559	56	173	407	1047	124	233	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	1%	1%	1%
Turn Type	Prot		Perm	Prot		Perm	pm+pt		Free	pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2			6	8		Free	4		
Actuated Green, G (s)	15.1	32.6	32.6	20.5	40.0	40.0	36.9	27.9	110.0	30.9	24.9	
Effective Green, g (s)	17.6	35.1	32.6	20.5	42.5	42.5	36.9	30.4	110.0	30.9	27.4	
Actuated g/C Ratio	0.16	0.32	0.30	0.19	0.39	0.39	0.34	0.28	1.00	0.28	0.25	
Clearance Time (s)	4.0	6.5	6.5	6.0	6.5	6.5	4.0	6.5		4.0	6.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	286	1140	474	634	1354	606	366	515	1583	175	860	
v/s Ratio Prot	0.10	c0.29		c0.16	0.16		0.04	c0.22		0.04	0.07	
v/s Ratio Perm			0.07			0.04	0.12		c0.66	0.16		
v/c Ratio	0.65	0.91	0.24	0.86	0.41	0.09	0.47	0.79	0.66	0.71	0.27	
Uniform Delay, d1	43.3	35.9	29.3	43.4	24.6	21.5	27.1	36.8	0.0	31.9	33.3	
Progression Factor	1.00	1.00	1.00	1.50	0.33	0.02	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	5.3	11.9	1.2	11.4	0.9	0.3	1.0	8.1	2.2	12.3	0.2	
Delay (s)	48.6	47.8	30.5	76.6	8.9	0.7	28.1	44.9	2.2	44.3	33.4	
Level of Service	D	D	C	E	A	A	C	D	A	D	C	
Approach Delay (s)		45.0			38.5			15.6			36.9	
Approach LOS		D			D			B			D	

Intersection Summary			
HCM Average Control Delay	32.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

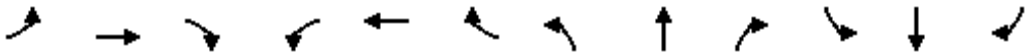
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	470	140	440	545	0	0	0	0	395	0	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	3.5	3.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3574	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.41	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3574	1599	768	3574					1698	1698	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	511	152	478	592	0	0	0	0	429	0	266
RTOR Reduction (vph)	0	0	82	0	0	0	0	0	0	0	0	213
Lane Group Flow (vph)	0	511	70	478	592	0	0	0	0	214	215	53
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		6	6						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		44.0	44.0	63.9	19.9					18.6	18.6	18.6
Effective Green, g (s)		46.0	46.0	67.9	21.9					20.1	20.1	20.1
Actuated g/C Ratio		0.46	0.46	0.68	0.22					0.20	0.20	0.20
Clearance Time (s)		6.0	6.0	5.5	5.5					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)		1644	736	745	783					341	341	321
v/s Ratio Prot		0.14		0.14	c0.17							
v/s Ratio Perm			0.04	c0.30						0.13	0.13	0.03
v/c Ratio		0.31	0.10	0.64	0.76					0.63	0.63	0.17
Uniform Delay, d1		17.0	15.2	14.9	36.5					36.5	36.6	33.0
Progression Factor		1.09	2.52	0.94	0.68					1.00	1.00	1.00
Incremental Delay, d2		0.5	0.3	1.5	3.5					3.6	3.8	0.2
Delay (s)		19.0	38.7	15.5	28.4					40.1	40.3	33.3
Level of Service		B	D	B	C					D	D	C
Approach Delay (s)		23.5			22.6			0.0			37.6	
Approach LOS		C			C			A			D	

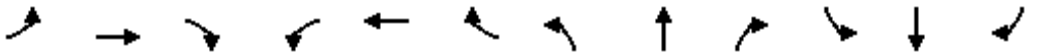
Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	270	600	0	0	900	655	85	0	240	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1780	3574			3574	1599		1787	1599			
Flt Permitted	0.17	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	311	3574			3574	1599		1787	1599			
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	303	674	0	0	1011	736	96	0	270	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	360	0	0	235	0	0	0
Lane Group Flow (vph)	303	674	0	0	1011	376	0	96	35	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1	1 2			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	70.9	76.9			44.0	44.0		11.6	11.6			
Effective Green, g (s)	72.9	77.9			46.0	46.0		13.1	13.1			
Actuated g/C Ratio	0.73	0.78			0.46	0.46		0.13	0.13			
Clearance Time (s)	6.0				6.0	6.0		5.5	5.5			
Vehicle Extension (s)	3.0				3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	637	2784			1644	736		234	209			
v/s Ratio Prot	c0.13	0.19			c0.28							
v/s Ratio Perm	0.21					0.24		0.05	0.02			
v/c Ratio	0.48	0.24			0.61	0.51		0.41	0.17			
Uniform Delay, d1	8.5	3.0			20.3	19.1		39.9	38.6			
Progression Factor	2.85	0.28			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.5	0.0			1.7	2.5		1.2	0.4			
Delay (s)	24.8	0.9			22.1	21.6		41.1	39.0			
Level of Service	C	A			C	C		D	D			
Approach Delay (s)		8.3			21.9			39.5			0.0	
Approach LOS		A			C			D			A	

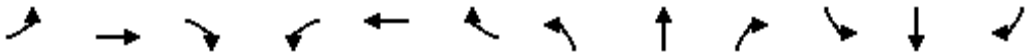
Intersection Summary			
HCM Average Control Delay	19.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	305	10	85	500	200	55	75	100	210	50	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583		3301		1698	1733	1599
Flt Permitted	0.38	1.00	1.00	0.51	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (perm)	723	3574	1599	946	3539	1583		3301		1698	1733	1599
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	339	11	94	556	222	61	83	111	233	56	39
RTOR Reduction (vph)	0	0	6	0	0	111	0	95	0	0	0	32
Lane Group Flow (vph)	56	339	5	94	556	111	0	160	0	142	147	7
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	47.1	41.1	41.1	49.1	42.1	42.1		10.2		13.7	13.7	13.7
Effective Green, g (s)	49.1	44.1	44.1	51.1	45.1	45.1		14.2		17.7	17.7	17.7
Actuated g/C Ratio	0.49	0.44	0.44	0.51	0.45	0.45		0.14		0.18	0.18	0.18
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	429	1576	705	549	1596	714		469		301	307	283
v/s Ratio Prot	0.01	0.09		c0.01	c0.16			c0.05		0.08	c0.08	
v/s Ratio Perm	0.05		0.00	0.07		0.07						0.00
v/c Ratio	0.13	0.22	0.01	0.17	0.35	0.15		0.34		0.47	0.48	0.02
Uniform Delay, d1	13.5	17.3	15.7	12.7	17.9	16.2		38.7		37.0	37.0	34.0
Progression Factor	1.00	1.00	1.00	2.39	2.11	5.75		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	0.0	0.1	0.5	0.4		0.4		1.2	1.2	0.0
Delay (s)	13.7	17.6	15.7	30.5	38.2	93.6		39.1		38.1	38.2	34.0
Level of Service	B	B	B	C	D	F		D		D	D	C
Approach Delay (s)		17.0			51.5			39.1			37.7	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM Average Control Delay	39.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	285	440	115	140	1075	40	235	125	60	40	85	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3400		1787	3178	
Flt Permitted	0.08	1.00	1.00	0.43	1.00	1.00	0.40	1.00		0.63	1.00	
Satd. Flow (perm)	146	3574	1599	802	3574	1599	753	3400		1181	3178	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	303	468	122	149	1144	43	250	133	64	43	90	255
RTOR Reduction (vph)	0	0	76	0	0	28	0	41	0	0	183	0
Lane Group Flow (vph)	303	468	46	149	1144	15	250	156	0	43	162	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	64.8	48.9	48.9	57.0	45.0	45.0	54.3	40.8		43.3	35.3	
Effective Green, g (s)	69.8	52.4	52.4	62.0	48.5	48.5	57.8	44.3		48.3	38.8	
Actuated g/C Ratio	0.51	0.38	0.38	0.45	0.35	0.35	0.42	0.32		0.35	0.28	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	1360	608	465	1259	563	436	1094		460	895	
v/s Ratio Prot	c0.14	0.13		0.03	0.32		c0.07	0.05		0.01	0.05	
v/s Ratio Perm	c0.38		0.03	0.11		0.01	c0.17			0.03		
v/c Ratio	1.03	0.34	0.08	0.32	0.91	0.03	0.57	0.14		0.09	0.18	
Uniform Delay, d1	44.6	30.4	27.2	22.8	42.5	29.2	27.5	33.2		29.7	37.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	61.7	0.7	0.2	0.4	11.2	0.1	1.8	0.3		0.1	0.4	
Delay (s)	106.3	31.1	27.5	23.2	53.7	29.3	29.4	33.5		29.8	37.9	
Level of Service	F	C	C	C	D	C	C	C		C	D	
Approach Delay (s)		56.1			49.5			31.2			37.0	
Approach LOS		E			D			C			D	

Intersection Summary			
HCM Average Control Delay	47.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	137.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.0%	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												
Volume (vph)	0	895	145	335	480	0	0	0	0	765	0	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	3.5	3.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3574	1599	1770	3539					1698	1698	1599
Flt Permitted		1.00	1.00	0.13	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3574	1599	243	3539					1698	1698	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	942	153	353	505	0	0	0	0	805	0	379
RTOR Reduction (vph)	0	0	71	0	0	0	0	0	0	0	0	253
Lane Group Flow (vph)	0	942	82	353	505	0	0	0	0	402	403	126
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		6	6						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		33.8	33.8	50.7	16.9					31.8	31.8	31.8
Effective Green, g (s)		35.8	35.8	54.7	18.9					33.3	33.3	33.3
Actuated g/C Ratio		0.36	0.36	0.55	0.19					0.33	0.33	0.33
Clearance Time (s)		6.0	6.0	5.5	5.5					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)		1279	572	422	669					565	565	532
v/s Ratio Prot		0.26		c0.16	0.14							
v/s Ratio Perm			0.05	c0.30						0.24	0.24	0.08
v/c Ratio		0.74	0.14	0.84	0.75					0.71	0.71	0.24
Uniform Delay, d1		28.0	21.7	30.7	38.4					29.2	29.2	24.2
Progression Factor		0.75	0.87	0.65	0.67					1.00	1.00	1.00
Incremental Delay, d2		3.4	0.5	11.8	4.0					4.2	4.3	0.2
Delay (s)		24.4	19.3	31.7	29.8					33.4	33.4	24.4
Level of Service		C	B	C	C					C	C	C
Approach Delay (s)		23.7			30.5			0.0			30.5	
Approach LOS		C			C			A			C	

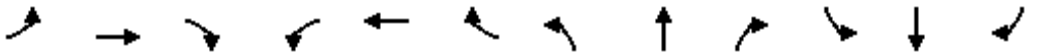
Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	235	1425	0	0	605	300	215	0	610	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3574	1599		1787	1599			
Flt Permitted	0.27	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	503	3574			3574	1599		1787	1599			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	258	1566	0	0	665	330	236	0	670	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	212	0	0	48	0	0	0
Lane Group Flow (vph)	258	1566	0	0	665	118	0	236	622	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1	1 2			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	65.0	71.0			33.8	33.8		17.5	17.5			
Effective Green, g (s)	67.0	72.0			35.8	35.8		19.0	19.0			
Actuated g/C Ratio	0.67	0.72			0.36	0.36		0.19	0.19			
Clearance Time (s)	6.0				6.0	6.0		5.5	5.5			
Vehicle Extension (s)	3.0				3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	750	2573			1279	572		340	304			
v/s Ratio Prot	0.11	c0.44			0.19							
v/s Ratio Perm	0.12					0.07		0.13	c0.39			
v/c Ratio	0.34	0.61			0.52	0.21		0.69	2.05			
Uniform Delay, d1	7.4	7.0			25.3	22.3		37.8	40.5			
Progression Factor	2.91	0.40			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.2	0.3			1.5	0.8		6.0	482.3			
Delay (s)	21.7	3.1			26.8	23.1		43.8	522.8			
Level of Service	C	A			C	C		D	F			
Approach Delay (s)		5.7			25.6			398.1			0.0	
Approach LOS		A			C			F			A	

Intersection Summary			
HCM Average Control Delay	106.5	HCM Level of Service	F
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		

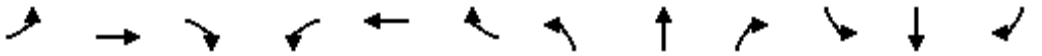
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	600	40	105	420	315	50	145	105	335	90	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599		3358		1698	1737	1599
Flt Permitted	0.45	1.00	1.00	0.27	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (perm)	846	3574	1599	509	3574	1599		3358		1698	1737	1599
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	101	638	43	112	447	335	53	154	112	356	96	53
RTOR Reduction (vph)	0	0	25	0	0	204	0	81	0	0	0	41
Lane Group Flow (vph)	101	638	18	112	447	131	0	238	0	224	228	12
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	39.8	33.9	33.9	44.0	36.0	36.0		12.1		18.0	18.0	18.0
Effective Green, g (s)	41.8	36.9	36.9	46.0	39.0	39.0		16.1		22.0	22.0	22.0
Actuated g/C Ratio	0.42	0.37	0.37	0.46	0.39	0.39		0.16		0.22	0.22	0.22
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	419	1319	590	349	1394	624		541		374	382	352
v/s Ratio Prot	0.02	c0.18		c0.03	0.13			c0.07		c0.13	0.13	
v/s Ratio Perm	0.08		0.01	0.12		0.08						0.01
v/c Ratio	0.24	0.48	0.03	0.32	0.32	0.21		0.44		0.60	0.60	0.03
Uniform Delay, d1	18.0	24.2	20.1	16.5	21.3	20.3		37.9		35.0	35.0	30.6
Progression Factor	1.00	1.00	1.00	1.12	1.20	4.65		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	1.3	0.1	0.4	0.5	0.6		0.6		2.6	2.5	0.0
Delay (s)	18.3	25.5	20.2	19.0	25.9	94.7		38.5		37.6	37.5	30.7
Level of Service	B	C	C	B	C	F		D		D	D	C
Approach Delay (s)		24.3			50.8			38.5			36.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	38.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

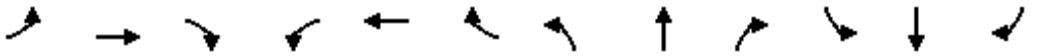
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	1335	445	295	475	70	275	155	130	70	215	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3330		1787	3354	
Flt Permitted	0.37	1.00	1.00	0.08	1.00	1.00	0.37	1.00		0.57	1.00	
Satd. Flow (perm)	704	3574	1599	155	3574	1599	697	3330		1074	3354	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	260	1391	464	307	495	73	286	161	135	73	224	156
RTOR Reduction (vph)	0	0	225	0	0	47	0	92	0	0	97	0
Lane Group Flow (vph)	260	1391	239	307	495	26	286	204	0	73	283	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	59.7	45.0	45.0	62.1	46.2	46.2	54.8	40.9		43.8	35.4	
Effective Green, g (s)	64.7	48.5	48.5	67.1	49.7	49.7	58.3	44.4		48.8	38.9	
Actuated g/C Ratio	0.47	0.35	0.35	0.49	0.36	0.36	0.42	0.32		0.35	0.28	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	464	1254	561	293	1285	575	423	1070		435	944	
v/s Ratio Prot	0.07	c0.39		c0.14	0.14		c0.08	0.06		0.01	0.08	
v/s Ratio Perm	0.19		0.15	0.37		0.02	c0.20			0.05		
v/c Ratio	0.56	1.11	0.43	1.05	0.39	0.05	0.68	0.19		0.17	0.30	
Uniform Delay, d1	23.4	44.8	34.2	44.6	32.9	28.8	28.3	33.9		30.1	39.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	60.9	2.4	65.6	0.9	0.1	4.2	0.4		0.2	0.8	
Delay (s)	24.9	105.8	36.6	110.3	33.8	29.0	32.5	34.3		30.3	39.8	
Level of Service	C	F	D	F	C	C	C	C		C	D	
Approach Delay (s)		80.7			60.2			33.4			38.3	
Approach LOS		F			E			C			D	

Intersection Summary			
HCM Average Control Delay	64.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	138.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		

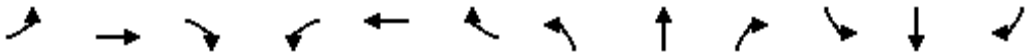
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	515	224	552	867	0	0	0	0	517	0	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3574	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3574	1599	1787	3574					1698	1698	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	560	243	600	942	0	0	0	0	562	0	332
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	146
Lane Group Flow (vph)	0	560	243	600	942	0	0	0	0	281	281	186
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4							5 6		5 6
Actuated Green, G (s)		26.0	26.0	51.0	83.0					26.0	26.0	26.0
Effective Green, g (s)		28.0	28.0	53.0	79.5					27.5	27.5	27.5
Actuated g/C Ratio		0.23	0.23	0.44	0.66					0.23	0.23	0.23
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		834	373	789	2368					389	389	366
v/s Ratio Prot		c0.16		c0.34	0.26							
v/s Ratio Perm			0.15							c0.17	0.17	0.12
v/c Ratio		0.67	0.65	0.76	0.40					0.72	0.72	0.51
Uniform Delay, d1		41.8	41.6	28.2	9.3					42.7	42.7	40.4
Progression Factor		1.01	1.00	0.19	0.14					1.00	1.00	1.00
Incremental Delay, d2		2.0	3.8	0.6	0.0					6.5	6.5	1.1
Delay (s)		44.3	45.5	6.1	1.3					49.2	49.2	41.5
Level of Service		D	D	A	A					D	D	D
Approach Delay (s)		44.6			3.2			0.0			46.3	
Approach LOS		D			A			A			D	

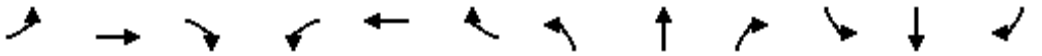
Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	736	0	0	1347	1092	100	0	276	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0			4.0	2.0		4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	0.88			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1780	3574			3574	1599		1787	2814			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1780	3574			3574	1599		1787	2814			
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	347	827	0	0	1513	1227	112	0	310	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	347	827	0	0	1513	1227	0	112	310	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Prot					Free	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases						Free	2 3		2 3			
Actuated Green, G (s)	25.5	71.0			40.0	120.0		35.5	35.5			
Effective Green, g (s)	26.5	58.5			38.5	120.0		37.0	37.0			
Actuated g/C Ratio	0.22	0.49			0.32	1.00		0.31	0.31			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	393	1742			1147	1599		551	868			
v/s Ratio Prot	c0.19	0.23			c0.42							
v/s Ratio Perm						c0.77		0.06	0.11			
v/c Ratio	0.88	0.47			1.32	0.77		0.20	0.36			
Uniform Delay, d1	45.2	20.5			40.8	0.0		30.6	32.3			
Progression Factor	0.48	0.08			1.00	1.00		1.00	1.00			
Incremental Delay, d2	16.6	0.2			149.8	3.6		0.2	0.3			
Delay (s)	38.2	1.7			190.6	3.6		30.8	32.5			
Level of Service	D	A			F	A		C	C			
Approach Delay (s)		12.5			106.8			32.1			0.0	
Approach LOS		B			F			C			A	

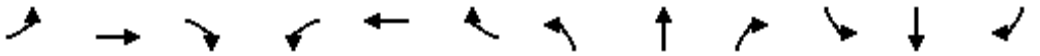
Intersection Summary			
HCM Average Control Delay	74.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	392	14	122	810	230	76	105	101	240	75	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583		3338		1698	1741	1599
Flt Permitted	0.23	1.00	1.00	0.42	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (perm)	431	3574	1599	787	3539	1583		3338		1698	1741	1599
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	436	16	136	900	256	84	117	112	267	83	42
RTOR Reduction (vph)	0	0	9	0	0	81	0	69	0	0	0	35
Lane Group Flow (vph)	61	436	7	136	900	175	0	244	0	174	176	7
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	57.8	52.4	52.4	64.2	55.6	55.6		13.8		17.2	17.2	17.2
Effective Green, g (s)	59.8	55.4	55.4	66.2	58.6	58.6		17.8		21.2	21.2	21.2
Actuated g/C Ratio	0.50	0.46	0.46	0.55	0.49	0.49		0.15		0.18	0.18	0.18
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	287	1650	738	513	1728	773		495		300	308	282
v/s Ratio Prot	0.01	0.12		c0.02	c0.25			c0.07		c0.10	0.10	
v/s Ratio Perm	0.09		0.00	0.13		0.11						0.00
v/c Ratio	0.21	0.26	0.01	0.27	0.52	0.23		0.49		0.58	0.57	0.03
Uniform Delay, d1	16.6	19.8	17.5	13.4	21.1	17.7		47.0		45.3	45.2	40.9
Progression Factor	1.00	1.00	1.00	0.28	0.32	0.12		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.4	0.0	0.3	1.0	0.6		0.8		2.7	2.6	0.0
Delay (s)	17.0	20.2	17.5	4.0	7.7	2.8		47.7		48.0	47.8	40.9
Level of Service	B	C	B	A	A	A		D		D	D	D
Approach Delay (s)		19.7			6.3			47.7			47.2	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

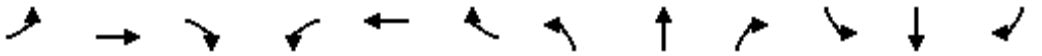
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	335	477	206	159	1423	113	746	280	70	85	253	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3468		1787	3294	
Flt Permitted	0.08	1.00	1.00	0.39	1.00	1.00	0.17	1.00		0.43	1.00	
Satd. Flow (perm)	158	3574	1599	739	3574	1599	317	3468		804	3294	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	356	507	219	169	1514	120	794	298	74	90	269	295
RTOR Reduction (vph)	0	0	126	0	0	69	0	18	0	0	134	0
Lane Group Flow (vph)	356	507	93	169	1514	51	794	354	0	90	430	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	55.1	45.1	45.1	55.1	45.1	45.1	33.1	23.1		28.9	21.0	
Effective Green, g (s)	60.1	48.6	48.6	60.1	48.6	48.6	38.1	26.6		33.9	24.5	
Actuated g/C Ratio	0.53	0.43	0.43	0.53	0.43	0.43	0.33	0.23		0.30	0.21	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	262	1522	681	504	1522	681	267	808		328	707	
v/s Ratio Prot	c0.15	0.14		0.04	0.42		c0.33	0.10		0.02	0.13	
v/s Ratio Perm	c0.57		0.06	0.14		0.03	c0.67			0.06		
v/c Ratio	1.36	0.33	0.14	0.34	0.99	0.08	2.97	0.44		0.27	0.61	
Uniform Delay, d1	35.1	21.9	20.0	14.4	32.6	19.4	32.4	37.4		29.8	40.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	184.2	0.1	0.1	0.4	21.7	0.0	898.2	0.4		0.5	1.5	
Delay (s)	219.4	22.0	20.1	14.8	54.3	19.5	930.6	37.7		30.2	41.9	
Level of Service	F	C	C	B	D	B	F	D		C	D	
Approach Delay (s)		86.6			48.3			645.8			40.3	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM Average Control Delay	204.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	114.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	128.5%	ICU Level of Service	H
Analysis Period (min)	15		

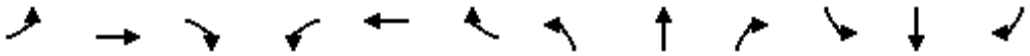
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1422	164	388	774	0	0	0	0	990	0	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5	5.5	4.0	4.0					2.5	2.5	2.5
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3574	1599	1770	3539					1698	1698	1599
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3574	1599	1770	3539					1698	1698	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1497	173	408	815	0	0	0	0	1042	0	434
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	171
Lane Group Flow (vph)	0	1497	173	408	815	0	0	0	0	521	521	263
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4							5 6		5 6
Actuated Green, G (s)		36.6	36.6	38.0	80.6					29.9	29.9	29.9
Effective Green, g (s)		38.6	38.6	40.0	77.1					31.4	31.4	31.4
Actuated g/C Ratio		0.32	0.32	0.33	0.64					0.26	0.26	0.26
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1150	514	590	2274					444	444	418
v/s Ratio Prot		c0.42		c0.23	0.23							
v/s Ratio Perm			0.11							c0.31	0.31	0.16
v/c Ratio		1.30	0.34	0.69	0.36					1.17	1.17	0.63
Uniform Delay, d1		40.7	31.0	34.7	10.0					44.3	44.3	39.2
Progression Factor		0.78	0.81	0.20	0.14					1.00	1.00	1.00
Incremental Delay, d2		140.0	0.3	0.3	0.0					99.5	99.5	3.1
Delay (s)		171.6	25.3	7.4	1.5					143.8	143.8	42.3
Level of Service		F	C	A	A					F	F	D
Approach Delay (s)		156.4			3.5			0.0			114.0	
Approach LOS		F			A			A			F	

Intersection Summary			
HCM Average Control Delay	99.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

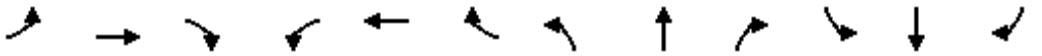
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	271	2077	0	0	827	541	269	0	734	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0			4.0	2.0		4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	0.88			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3574	1599		1787	2814			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1787	3574			3574	1599		1787	2814			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	298	2282	0	0	909	595	296	0	807	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	298	2282	0	0	909	595	0	296	807	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Prot					Free	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases						Free	2 3		2 3			
Actuated Green, G (s)	39.9	69.9			26.0	120.0		36.6	36.6			
Effective Green, g (s)	40.9	60.4			26.0	120.0		38.1	38.1			
Actuated g/C Ratio	0.34	0.50			0.22	1.00		0.32	0.32			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	609	1799			774	1599		567	893			
v/s Ratio Prot	0.17	c0.64			c0.25							
v/s Ratio Perm						0.37		0.17	c0.29			
v/c Ratio	0.49	1.27			1.17	0.37		0.52	0.90			
Uniform Delay, d1	31.3	29.8			47.0	0.0		33.5	39.2			
Progression Factor	0.20	0.19			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.1	121.2			91.9	0.7		0.9	12.4			
Delay (s)	6.3	126.8			138.9	0.7		34.4	51.6			
Level of Service	A	F			F	A		C	D			
Approach Delay (s)		112.9			84.2			46.9			0.0	
Approach LOS		F			F			D			A	

Intersection Summary			
HCM Average Control Delay	90.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.5
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

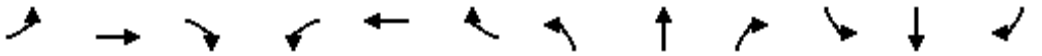
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1036	49	173	603	390	55	156	186	383	138	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599		3300		1698	1746	1599
Flt Permitted	0.34	1.00	1.00	0.08	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (perm)	637	3574	1599	153	3574	1599		3300		1698	1746	1599
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	122	1102	52	184	641	415	59	166	198	407	147	60
RTOR Reduction (vph)	0	0	16	0	0	207	0	96	0	0	0	44
Lane Group Flow (vph)	122	1102	36	184	641	208	0	327	0	273	281	16
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	50.2	44.2	44.2	58.4	48.3	48.3		16.6		21.1	21.1	21.1
Effective Green, g (s)	52.2	47.2	47.2	60.3	51.3	51.3		20.6		25.1	25.1	25.1
Actuated g/C Ratio	0.44	0.39	0.39	0.50	0.43	0.43		0.17		0.21	0.21	0.21
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	344	1406	629	228	1528	684		567		355	365	334
v/s Ratio Prot	0.02	0.31		c0.07	0.18			c0.10		0.16	c0.16	
v/s Ratio Perm	0.13		0.02	c0.33		0.13						0.01
v/c Ratio	0.35	0.78	0.06	0.81	0.42	0.30		0.58		0.77	0.77	0.05
Uniform Delay, d1	20.9	31.9	22.6	28.8	24.0	22.6		45.7		44.7	44.7	37.9
Progression Factor	1.00	1.00	1.00	1.16	0.57	0.63		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	4.4	0.2	16.8	0.8	1.0		1.4		9.6	9.4	0.1
Delay (s)	21.5	36.4	22.8	50.3	14.3	15.3		47.1		54.4	54.2	38.0
Level of Service	C	D	C	D	B	B		D		D	D	D
Approach Delay (s)		34.4			20.0			47.1			52.7	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

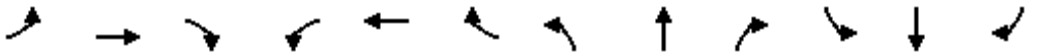
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	323	1788	942	338	577	141	316	322	148	148	448	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3405		1787	3387	
Flt Permitted	0.31	1.00	1.00	0.08	1.00	1.00	0.17	1.00		0.33	1.00	
Satd. Flow (perm)	585	3574	1599	158	3574	1599	327	3405		624	3387	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	336	1862	981	352	601	147	329	335	154	154	467	250
RTOR Reduction (vph)	0	0	181	0	0	91	0	42	0	0	56	0
Lane Group Flow (vph)	336	1862	800	352	601	56	329	447	0	154	661	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	55.0	45.0	45.0	55.0	45.0	45.0	44.0	34.0		44.0	34.0	
Effective Green, g (s)	60.0	48.5	48.5	60.0	48.5	48.5	49.0	37.5		49.0	37.5	
Actuated g/C Ratio	0.47	0.38	0.38	0.47	0.38	0.38	0.39	0.30		0.39	0.30	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	395	1365	611	235	1365	611	270	1005		355	1000	
v/s Ratio Prot	0.08	0.52		c0.15	0.17		c0.12	0.13		0.04	0.20	
v/s Ratio Perm	0.32		0.50	c0.56		0.04	c0.35			0.12		
v/c Ratio	0.85	1.36	1.31	1.50	0.44	0.09	1.22	0.44		0.43	0.66	
Uniform Delay, d1	25.4	39.2	39.2	38.3	29.2	25.1	32.7	36.3		26.8	39.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.9	168.6	150.6	245.1	0.2	0.1	127.1	1.4		0.9	3.4	
Delay (s)	41.4	207.9	189.9	283.4	29.4	25.2	159.8	37.7		27.6	42.6	
Level of Service	D	F	F	F	C	C	F	D		C	D	
Approach Delay (s)		184.7			110.1			86.8			40.0	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM Average Control Delay	136.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	127.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		

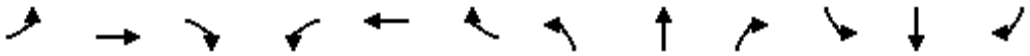
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	515	224	552	867	0	0	0	0	517	0	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	0.97	0.95					0.91	0.91	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	3467	3574					3253	1626	1599
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	3467	3574					3253	1626	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	560	243	600	942	0	0	0	0	562	0	332
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	146
Lane Group Flow (vph)	0	560	243	600	942	0	0	0	0	377	185	186
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4							5 6		5 6
Actuated Green, G (s)		28.5	28.5	48.5	83.0					26.0	26.0	26.0
Effective Green, g (s)		30.5	30.5	50.5	80.5					27.5	27.5	27.5
Actuated g/C Ratio		0.25	0.25	0.42	0.67					0.23	0.23	0.23
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1305	406	1459	2398					745	373	366
v/s Ratio Prot		0.11		c0.17	c0.26							
v/s Ratio Perm			c0.15							0.12	0.11	c0.12
v/c Ratio		0.43	0.60	0.41	0.39					0.51	0.50	0.51
Uniform Delay, d1		37.5	39.4	24.3	8.8					40.3	40.2	40.4
Progression Factor		1.01	1.01	0.05	0.25					1.00	1.00	1.00
Incremental Delay, d2		0.2	2.3	0.4	0.1					0.5	1.0	1.1
Delay (s)		38.1	41.9	1.5	2.2					40.9	41.3	41.5
Level of Service		D	D	A	A					D	D	D
Approach Delay (s)		39.3			2.0			0.0			41.2	
Approach LOS		D			A			A			D	

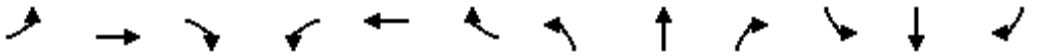
Intersection Summary			
HCM Average Control Delay	22.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	736	0	0	1347	1092	100	0	276	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0			4.0	2.0		4.5	4.5			
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00	0.88			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1780	5136			5136	1599		1787	2814			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1780	5136			5136	1599		1787	2814			
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	347	827	0	0	1513	1227	112	0	310	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	347	827	0	0	1513	1227	0	112	310	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Prot					Free	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases						Free	2 3		2 3			
Actuated Green, G (s)	28.0	72.0			38.5	120.0		35.5	35.5			
Effective Green, g (s)	29.0	59.5			37.0	120.0		37.0	37.0			
Actuated g/C Ratio	0.24	0.50			0.31	1.00		0.31	0.31			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	430	2547			1584	1599		551	868			
v/s Ratio Prot	0.19	0.16			c0.29							
v/s Ratio Perm						c0.77		0.06	0.11			
v/c Ratio	0.81	0.32			0.96	0.77		0.20	0.36			
Uniform Delay, d1	42.9	18.2			40.7	0.0		30.6	32.3			
Progression Factor	0.55	0.10			1.00	1.00		1.00	1.00			
Incremental Delay, d2	10.0	0.1			13.4	3.6		0.2	0.3			
Delay (s)	33.5	1.9			54.1	3.6		30.8	32.5			
Level of Service	C	A			D	A		C	C			
Approach Delay (s)		11.2			31.5			32.1			0.0	
Approach LOS		B			C			C			A	

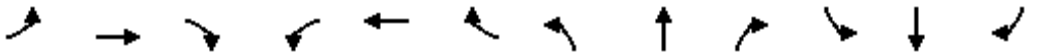
Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	392	14	122	810	230	76	105	101	240	75	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583		3338		1698	1741	1599
Flt Permitted	0.23	1.00	1.00	0.42	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (perm)	431	3574	1599	787	3539	1583		3338		1698	1741	1599
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	436	16	136	900	256	84	117	112	267	83	42
RTOR Reduction (vph)	0	0	9	0	0	81	0	69	0	0	0	35
Lane Group Flow (vph)	61	436	7	136	900	175	0	244	0	174	176	7
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	57.8	52.4	52.4	64.2	55.6	55.6		13.8		17.2	17.2	17.2
Effective Green, g (s)	59.8	55.4	55.4	66.2	58.6	58.6		17.8		21.2	21.2	21.2
Actuated g/C Ratio	0.50	0.46	0.46	0.55	0.49	0.49		0.15		0.18	0.18	0.18
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	287	1650	738	513	1728	773		495		300	308	282
v/s Ratio Prot	0.01	0.12		c0.02	c0.25			c0.07		c0.10	0.10	
v/s Ratio Perm	0.09		0.00	0.13		0.11						0.00
v/c Ratio	0.21	0.26	0.01	0.27	0.52	0.23		0.49		0.58	0.57	0.03
Uniform Delay, d1	16.6	19.8	17.5	13.4	21.1	17.7		47.0		45.3	45.2	40.9
Progression Factor	1.00	1.00	1.00	0.27	0.31	0.12		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.4	0.0	0.3	1.0	0.6		0.8		2.7	2.6	0.0
Delay (s)	17.0	20.2	17.5	3.8	7.5	2.8		47.7		48.0	47.8	40.9
Level of Service	B	C	B	A	A	A		D		D	D	D
Approach Delay (s)		19.7			6.2			47.7			47.2	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

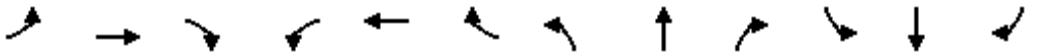
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	515	224	552	867	0	0	0	0	517	0	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	0.97	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	3467	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	3467	3574					1698	1698	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	560	243	600	942	0	0	0	0	562	0	332
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	146
Lane Group Flow (vph)	0	560	243	600	942	0	0	0	0	281	281	186
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4							5 6		5 6
Actuated Green, G (s)		28.5	28.5	48.5	83.0					26.0	26.0	26.0
Effective Green, g (s)		30.5	30.5	50.5	80.5					27.5	27.5	27.5
Actuated g/C Ratio		0.25	0.25	0.42	0.67					0.23	0.23	0.23
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1305	406	1459	2398					389	389	366
v/s Ratio Prot		0.11		c0.17	c0.26							
v/s Ratio Perm			c0.15							c0.17	0.17	0.12
v/c Ratio		0.43	0.60	0.41	0.39					0.72	0.72	0.51
Uniform Delay, d1		37.5	39.4	24.3	8.8					42.7	42.7	40.4
Progression Factor		1.01	1.01	0.05	0.25					1.00	1.00	1.00
Incremental Delay, d2		0.2	2.3	0.4	0.1					6.5	6.5	1.1
Delay (s)		38.1	41.9	1.5	2.2					49.2	49.2	41.5
Level of Service		D	D	A	A					D	D	D
Approach Delay (s)		39.3			2.0			0.0			46.3	
Approach LOS		D			A			A			D	

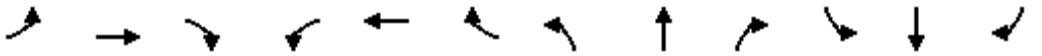
Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	736	0	0	1347	1092	100	0	276	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0			4.0	2.0		4.5	4.5			
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00	0.88			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1780	5136			5136	1599		1787	2814			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1780	5136			5136	1599		1787	2814			
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	347	827	0	0	1513	1227	112	0	310	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	347	827	0	0	1513	1227	0	112	310	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Prot					Free	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases						Free	2 3		2 3			
Actuated Green, G (s)	28.0	72.0			38.5	120.0		35.5	35.5			
Effective Green, g (s)	29.0	59.5			37.0	120.0		37.0	37.0			
Actuated g/C Ratio	0.24	0.50			0.31	1.00		0.31	0.31			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	430	2547			1584	1599		551	868			
v/s Ratio Prot	0.19	0.16			c0.29							
v/s Ratio Perm						c0.77		0.06	0.11			
v/c Ratio	0.81	0.32			0.96	0.77		0.20	0.36			
Uniform Delay, d1	42.9	18.2			40.7	0.0		30.6	32.3			
Progression Factor	0.54	0.10			1.00	1.00		1.00	1.00			
Incremental Delay, d2	9.9	0.1			13.4	3.6		0.2	0.3			
Delay (s)	33.0	1.9			54.1	3.6		30.8	32.5			
Level of Service	C	A			D	A		C	C			
Approach Delay (s)		11.1			31.5			32.1			0.0	
Approach LOS		B			C			C			A	

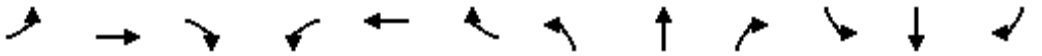
Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	392	14	122	810	230	76	105	101	240	75	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583		3338		1698	1741	1599
Flt Permitted	0.23	1.00	1.00	0.42	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (perm)	431	3574	1599	787	3539	1583		3338		1698	1741	1599
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	436	16	136	900	256	84	117	112	267	83	42
RTOR Reduction (vph)	0	0	9	0	0	81	0	69	0	0	0	35
Lane Group Flow (vph)	61	436	7	136	900	175	0	244	0	174	176	7
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	57.8	52.4	52.4	64.2	55.6	55.6		13.8		17.2	17.2	17.2
Effective Green, g (s)	59.8	55.4	55.4	66.2	58.6	58.6		17.8		21.2	21.2	21.2
Actuated g/C Ratio	0.50	0.46	0.46	0.55	0.49	0.49		0.15		0.18	0.18	0.18
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	287	1650	738	513	1728	773		495		300	308	282
v/s Ratio Prot	0.01	0.12		c0.02	c0.25			c0.07		c0.10	0.10	
v/s Ratio Perm	0.09		0.00	0.13		0.11						0.00
v/c Ratio	0.21	0.26	0.01	0.27	0.52	0.23		0.49		0.58	0.57	0.03
Uniform Delay, d1	16.6	19.8	17.5	13.4	21.1	17.7		47.0		45.3	45.2	40.9
Progression Factor	1.00	1.00	1.00	0.27	0.31	0.12		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.4	0.0	0.3	1.0	0.6		0.8		2.7	2.6	0.0
Delay (s)	17.0	20.2	17.5	3.8	7.5	2.8		47.7		48.0	47.8	40.9
Level of Service	B	C	B	A	A	A		D		D	D	D
Approach Delay (s)		19.7			6.2			47.7			47.2	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

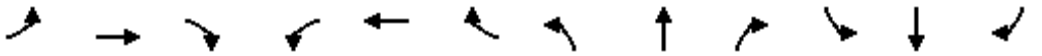
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	335	477	206	159	1423	113	746	280	70	85	253	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3468		1787	3294	
Flt Permitted	0.08	1.00	1.00	0.39	1.00	1.00	0.17	1.00		0.43	1.00	
Satd. Flow (perm)	158	3574	1599	739	3574	1599	317	3468		804	3294	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	356	507	219	169	1514	120	794	298	74	90	269	295
RTOR Reduction (vph)	0	0	126	0	0	69	0	18	0	0	134	0
Lane Group Flow (vph)	356	507	93	169	1514	51	794	354	0	90	430	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	55.1	45.1	45.1	55.1	45.1	45.1	33.1	23.1		28.9	21.0	
Effective Green, g (s)	60.1	48.6	48.6	60.1	48.6	48.6	38.1	26.6		33.9	24.5	
Actuated g/C Ratio	0.53	0.43	0.43	0.53	0.43	0.43	0.33	0.23		0.30	0.21	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	262	1522	681	504	1522	681	267	808		328	707	
v/s Ratio Prot	c0.15	0.14		0.04	0.42		c0.33	0.10		0.02	0.13	
v/s Ratio Perm	c0.57		0.06	0.14		0.03	c0.67			0.06		
v/c Ratio	1.36	0.33	0.14	0.34	0.99	0.08	2.97	0.44		0.27	0.61	
Uniform Delay, d1	35.1	21.9	20.0	14.4	32.6	19.4	32.4	37.4		29.8	40.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	184.2	0.1	0.1	0.4	21.7	0.0	898.2	0.4		0.5	1.5	
Delay (s)	219.4	22.0	20.1	14.8	54.3	19.5	930.6	37.7		30.2	41.9	
Level of Service	F	C	C	B	D	B	F	D		C	D	
Approach Delay (s)		86.6			48.3			645.8			40.3	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM Average Control Delay	204.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	114.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	128.5%	ICU Level of Service	H
Analysis Period (min)	15		

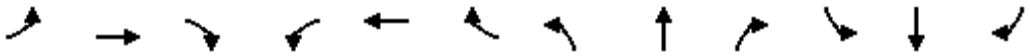
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1422	164	388	774	0	0	0	0	990	0	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.0	4.0					2.5	2.5	2.5
Lane Util. Factor		0.91	1.00	0.97	0.95					0.91	0.91	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	3433	3539					3253	1626	1599
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	3433	3539					3253	1626	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1497	173	408	815	0	0	0	0	1042	0	434
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	165
Lane Group Flow (vph)	0	1497	173	408	815	0	0	0	0	698	344	269
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4							5 6		5 6
Actuated Green, G (s)		36.0	36.0	37.0	79.0					31.0	31.0	31.0
Effective Green, g (s)		38.0	38.0	39.0	76.5					32.5	32.5	32.5
Actuated g/C Ratio		0.32	0.32	0.32	0.64					0.27	0.27	0.27
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1626	506	1116	2256					881	440	433
v/s Ratio Prot		c0.29		c0.12	c0.23							
v/s Ratio Perm			0.11							c0.21	0.21	0.17
v/c Ratio		0.92	0.34	0.37	0.36					0.79	0.78	0.62
Uniform Delay, d1		39.5	31.4	31.0	10.2					40.6	40.5	38.4
Progression Factor		0.69	0.64	0.12	0.27					1.00	1.00	1.00
Incremental Delay, d2		6.1	0.3	0.1	0.1					4.9	8.8	2.8
Delay (s)		33.5	20.5	3.9	2.9					45.5	49.2	41.1
Level of Service		C	C	A	A					D	D	D
Approach Delay (s)		32.1			3.2			0.0			45.1	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

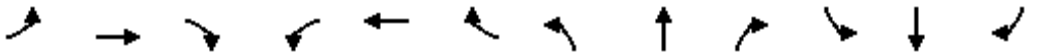
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	271	2077	0	0	827	541	269	0	734	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			4.0	2.0		4.5	4.5			
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00	0.88			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	5136			5136	1599		1787	2814			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1787	5136			5136	1599		1787	2814			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	298	2282	0	0	909	595	296	0	807	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	298	2282	0	0	909	595	0	296	807	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Prot					Free	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases						Free	2 3		2 3			
Actuated Green, G (s)	41.0	71.0			26.0	120.0		36.5	36.5			
Effective Green, g (s)	42.0	66.0			26.0	120.0		38.0	38.0			
Actuated g/C Ratio	0.35	0.55			0.22	1.00		0.32	0.32			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	625	2825			1113	1599		566	891			
v/s Ratio Prot	0.17	c0.44			c0.18							
v/s Ratio Perm						0.37		0.17	c0.29			
v/c Ratio	0.48	0.81			0.82	0.37		0.52	0.91			
Uniform Delay, d1	30.4	21.9			44.7	0.0		33.6	39.3			
Progression Factor	0.20	0.09			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.3	0.9			4.7	0.7		0.9	12.6			
Delay (s)	6.3	3.0			49.5	0.7		34.5	51.9			
Level of Service	A	A			D	A		C	D			
Approach Delay (s)		3.3			30.2			47.2			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

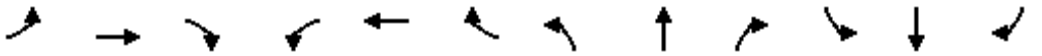
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1036	49	173	603	390	55	156	186	383	138	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599		3300		1698	1746	1599
Flt Permitted	0.36	1.00	1.00	0.08	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (perm)	674	3574	1599	155	3574	1599		3300		1698	1746	1599
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	122	1102	52	184	641	415	59	166	198	407	147	60
RTOR Reduction (vph)	0	0	15	0	0	206	0	140	0	0	0	43
Lane Group Flow (vph)	122	1102	37	184	641	209	0	283	0	273	281	17
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	49.4	43.4	43.4	60.5	49.5	49.5		15.2		21.3	21.3	21.3
Effective Green, g (s)	51.4	46.4	46.4	61.5	52.5	52.5		19.2		25.3	25.3	25.3
Actuated g/C Ratio	0.43	0.39	0.39	0.51	0.44	0.44		0.16		0.21	0.21	0.21
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	354	1382	618	258	1564	700		528		358	368	337
v/s Ratio Prot	0.02	c0.31		c0.08	0.18			c0.09		0.16	c0.16	
v/s Ratio Perm	0.13		0.02	0.29		0.13						0.01
v/c Ratio	0.34	0.80	0.06	0.71	0.41	0.30		0.54		0.76	0.76	0.05
Uniform Delay, d1	21.2	32.6	23.1	27.5	23.1	21.8		46.3		44.5	44.5	37.8
Progression Factor	1.00	1.00	1.00	1.68	0.46	0.22		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	4.9	0.2	8.1	0.7	1.0		1.0		9.3	9.1	0.1
Delay (s)	21.8	37.5	23.3	54.3	11.3	5.8		47.4		53.8	53.6	37.8
Level of Service	C	D	C	D	B	A		D		D	D	D
Approach Delay (s)		35.4			15.8			47.4			52.2	
Approach LOS		D			B			D			D	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

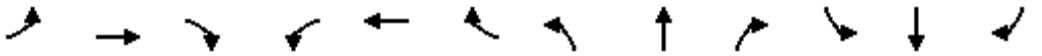
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1422	164	388	774	0	0	0	0	990	0	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.0	4.0					2.5	2.5	2.5
Lane Util. Factor		0.91	1.00	0.97	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	3433	3539					1698	1698	1599
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	3433	3539					1698	1698	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1497	173	408	815	0	0	0	0	1042	0	434
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	165
Lane Group Flow (vph)	0	1497	173	408	815	0	0	0	0	521	521	269
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4							5 6		5 6
Actuated Green, G (s)		36.0	36.0	37.0	79.0					31.0	31.0	31.0
Effective Green, g (s)		38.0	38.0	39.0	76.5					32.5	32.5	32.5
Actuated g/C Ratio		0.32	0.32	0.32	0.64					0.27	0.27	0.27
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1626	506	1116	2256					460	460	433
v/s Ratio Prot		c0.29		c0.12	c0.23							
v/s Ratio Perm			0.11							c0.31	0.31	0.17
v/c Ratio		0.92	0.34	0.37	0.36					1.13	1.13	0.62
Uniform Delay, d1		39.5	31.4	31.0	10.2					43.8	43.8	38.4
Progression Factor		0.69	0.64	0.12	0.27					1.00	1.00	1.00
Incremental Delay, d2		6.1	0.3	0.1	0.1					83.5	83.5	2.8
Delay (s)		33.5	20.5	3.9	2.9					127.3	127.3	41.1
Level of Service		C	C	A	A					F	F	D
Approach Delay (s)		32.1			3.2			0.0			102.0	
Approach LOS		C			A			A			F	

Intersection Summary			
HCM Average Control Delay	47.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

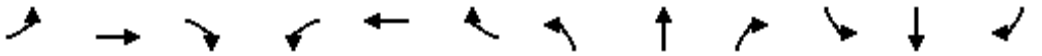
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	271	2077	0	0	827	541	269	0	734	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			4.0	2.0		4.5	4.5			
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00	0.88			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	5136			5136	1599		1787	2814			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1787	5136			5136	1599		1787	2814			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	298	2282	0	0	909	595	296	0	807	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	298	2282	0	0	909	595	0	296	807	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Prot					Free	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases						Free	2 3		2 3			
Actuated Green, G (s)	41.0	71.0			26.0	120.0		36.5	36.5			
Effective Green, g (s)	42.0	66.0			26.0	120.0		38.0	38.0			
Actuated g/C Ratio	0.35	0.55			0.22	1.00		0.32	0.32			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	625	2825			1113	1599		566	891			
v/s Ratio Prot	0.17	c0.44			c0.18							
v/s Ratio Perm						0.37		0.17	c0.29			
v/c Ratio	0.48	0.81			0.82	0.37		0.52	0.91			
Uniform Delay, d1	30.4	21.9			44.7	0.0		33.6	39.3			
Progression Factor	0.20	0.09			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.2	0.4			4.7	0.7		0.9	12.6			
Delay (s)	6.3	2.4			49.5	0.7		34.5	51.9			
Level of Service	A	A			D	A		C	D			
Approach Delay (s)		2.8			30.2			47.2			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

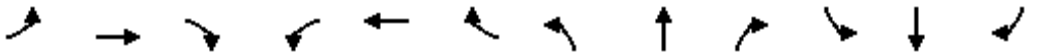
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1036	49	173	603	390	55	156	186	383	138	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599		3300		1698	1746	1599
Flt Permitted	0.36	1.00	1.00	0.08	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (perm)	674	3574	1599	155	3574	1599		3300		1698	1746	1599
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	122	1102	52	184	641	415	59	166	198	407	147	60
RTOR Reduction (vph)	0	0	15	0	0	206	0	140	0	0	0	43
Lane Group Flow (vph)	122	1102	37	184	641	209	0	283	0	273	281	17
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	49.4	43.4	43.4	60.5	49.5	49.5		15.2		21.3	21.3	21.3
Effective Green, g (s)	51.4	46.4	46.4	61.5	52.5	52.5		19.2		25.3	25.3	25.3
Actuated g/C Ratio	0.43	0.39	0.39	0.51	0.44	0.44		0.16		0.21	0.21	0.21
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	354	1382	618	258	1564	700		528		358	368	337
v/s Ratio Prot	0.02	c0.31		c0.08	0.18			c0.09		0.16	c0.16	
v/s Ratio Perm	0.13		0.02	0.29		0.13						0.01
v/c Ratio	0.34	0.80	0.06	0.71	0.41	0.30		0.54		0.76	0.76	0.05
Uniform Delay, d1	21.2	32.6	23.1	27.5	23.1	21.8		46.3		44.5	44.5	37.8
Progression Factor	1.00	1.00	1.00	1.68	0.46	0.22		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	4.9	0.2	8.1	0.7	1.0		1.0		9.3	9.1	0.1
Delay (s)	21.8	37.5	23.3	54.3	11.3	5.8		47.4		53.8	53.6	37.8
Level of Service	C	D	C	D	B	A		D		D	D	D
Approach Delay (s)		35.4			15.8			47.4			52.2	
Approach LOS		D			B			D			D	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

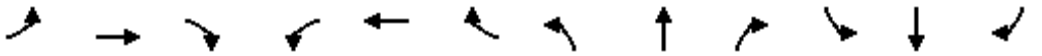
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	323	1788	942	338	577	141	316	322	148	148	448	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3405		1787	3387	
Flt Permitted	0.31	1.00	1.00	0.08	1.00	1.00	0.17	1.00		0.33	1.00	
Satd. Flow (perm)	585	3574	1599	158	3574	1599	327	3405		624	3387	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	336	1862	981	352	601	147	329	335	154	154	467	250
RTOR Reduction (vph)	0	0	181	0	0	91	0	42	0	0	56	0
Lane Group Flow (vph)	336	1862	800	352	601	56	329	447	0	154	661	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	55.0	45.0	45.0	55.0	45.0	45.0	44.0	34.0		44.0	34.0	
Effective Green, g (s)	60.0	48.5	48.5	60.0	48.5	48.5	49.0	37.5		49.0	37.5	
Actuated g/C Ratio	0.47	0.38	0.38	0.47	0.38	0.38	0.39	0.30		0.39	0.30	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	395	1365	611	235	1365	611	270	1005		355	1000	
v/s Ratio Prot	0.08	0.52		c0.15	0.17		c0.12	0.13		0.04	0.20	
v/s Ratio Perm	0.32		0.50	c0.56		0.04	c0.35			0.12		
v/c Ratio	0.85	1.36	1.31	1.50	0.44	0.09	1.22	0.44		0.43	0.66	
Uniform Delay, d1	25.4	39.2	39.2	38.3	29.2	25.1	32.7	36.3		26.8	39.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.9	168.6	150.6	245.1	0.2	0.1	127.1	1.4		0.9	3.4	
Delay (s)	41.4	207.9	189.9	283.4	29.4	25.2	159.8	37.7		27.6	42.6	
Level of Service	D	F	F	F	C	C	F	D		C	D	
Approach Delay (s)		184.7			110.1			86.8			40.0	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM Average Control Delay	136.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	127.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		

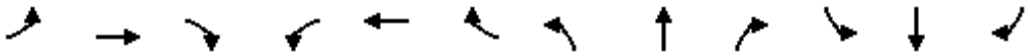
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	515	224	552	867	0	0	0	0	517	0	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00	0.97	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	3467	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	3467	3574					1698	1698	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	560	243	600	942	0	0	0	0	562	0	332
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	146
Lane Group Flow (vph)	0	560	243	600	942	0	0	0	0	281	281	186
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4							5 6		5 6
Actuated Green, G (s)		28.5	28.5	48.5	83.0					26.0	26.0	26.0
Effective Green, g (s)		30.5	30.5	50.5	80.5					27.5	27.5	27.5
Actuated g/C Ratio		0.25	0.25	0.42	0.67					0.23	0.23	0.23
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1305	406	1459	2398					389	389	366
v/s Ratio Prot		0.11		c0.17	c0.26							
v/s Ratio Perm			c0.15							c0.17	0.17	0.12
v/c Ratio		0.43	0.60	0.41	0.39					0.72	0.72	0.51
Uniform Delay, d1		37.5	39.4	24.3	8.8					42.7	42.7	40.4
Progression Factor		1.01	1.01	0.05	0.25					1.00	1.00	1.00
Incremental Delay, d2		0.2	2.3	0.4	0.1					6.5	6.5	1.1
Delay (s)		38.1	41.9	1.5	2.2					49.2	49.2	41.5
Level of Service		D	D	A	A					D	D	D
Approach Delay (s)		39.3			2.0			0.0			46.3	
Approach LOS		D			A			A			D	

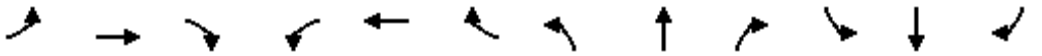
Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	736	0	0	1347	1092	100	0	276	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.0			4.0	2.0		4.5	4.5			
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00	0.88			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1780	5136			5136	1599		1787	2814			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1780	5136			5136	1599		1787	2814			
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	347	827	0	0	1513	1227	112	0	310	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	347	827	0	0	1513	1227	0	112	310	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	Prot					Free	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases						Free	2 3		2 3			
Actuated Green, G (s)	28.0	72.0			38.5	120.0		35.5	35.5			
Effective Green, g (s)	29.0	59.5			37.0	120.0		37.0	37.0			
Actuated g/C Ratio	0.24	0.50			0.31	1.00		0.31	0.31			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	430	2547			1584	1599		551	868			
v/s Ratio Prot	0.19	0.16			c0.29							
v/s Ratio Perm						c0.77		0.06	0.11			
v/c Ratio	0.81	0.32			0.96	0.77		0.20	0.36			
Uniform Delay, d1	42.9	18.2			40.7	0.0		30.6	32.3			
Progression Factor	0.54	0.10			1.00	1.00		1.00	1.00			
Incremental Delay, d2	9.9	0.1			13.4	3.6		0.2	0.3			
Delay (s)	33.0	1.9			54.1	3.6		30.8	32.5			
Level of Service	C	A			D	A		C	C			
Approach Delay (s)		11.1			31.5			32.1			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	70.6%	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												
Volume (vph)	55	392	14	122	810	230	76	105	101	240	75	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583		3338		1698	1741	1599
Flt Permitted	0.23	1.00	1.00	0.42	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (perm)	431	3574	1599	787	3539	1583		3338		1698	1741	1599
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	436	16	136	900	256	84	117	112	267	83	42
RTOR Reduction (vph)	0	0	9	0	0	81	0	69	0	0	0	35
Lane Group Flow (vph)	61	436	7	136	900	175	0	244	0	174	176	7
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	57.8	52.4	52.4	64.2	55.6	55.6		13.8		17.2	17.2	17.2
Effective Green, g (s)	59.8	55.4	55.4	66.2	58.6	58.6		17.8		21.2	21.2	21.2
Actuated g/C Ratio	0.50	0.46	0.46	0.55	0.49	0.49		0.15		0.18	0.18	0.18
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	287	1650	738	513	1728	773		495		300	308	282
v/s Ratio Prot	0.01	0.12		c0.02	c0.25			c0.07		c0.10	0.10	
v/s Ratio Perm	0.09		0.00	0.13		0.11						0.00
v/c Ratio	0.21	0.26	0.01	0.27	0.52	0.23		0.49		0.58	0.57	0.03
Uniform Delay, d1	16.6	19.8	17.5	13.4	21.1	17.7		47.0		45.3	45.2	40.9
Progression Factor	1.00	1.00	1.00	0.27	0.31	0.12		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.4	0.0	0.3	1.0	0.6		0.8		2.7	2.6	0.0
Delay (s)	17.0	20.2	17.5	3.8	7.5	2.8		47.7		48.0	47.8	40.9
Level of Service	B	C	B	A	A	A		D		D	D	D
Approach Delay (s)		19.7			6.2			47.7			47.2	
Approach LOS		B			A			D			D	

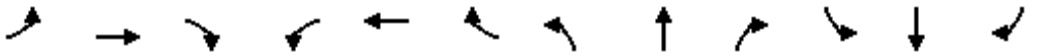
Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	335	477	206	159	1423	113	746	280	70	85	253	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3468		1787	3294	
Flt Permitted	0.08	1.00	1.00	0.39	1.00	1.00	0.17	1.00		0.43	1.00	
Satd. Flow (perm)	158	3574	1599	739	3574	1599	317	3468		804	3294	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	356	507	219	169	1514	120	794	298	74	90	269	295
RTOR Reduction (vph)	0	0	126	0	0	69	0	18	0	0	134	0
Lane Group Flow (vph)	356	507	93	169	1514	51	794	354	0	90	430	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	55.1	45.1	45.1	55.1	45.1	45.1	33.1	23.1		28.9	21.0	
Effective Green, g (s)	60.1	48.6	48.6	60.1	48.6	48.6	38.1	26.6		33.9	24.5	
Actuated g/C Ratio	0.53	0.43	0.43	0.53	0.43	0.43	0.33	0.23		0.30	0.21	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	262	1522	681	504	1522	681	267	808		328	707	
v/s Ratio Prot	c0.15	0.14		0.04	0.42		c0.33	0.10		0.02	0.13	
v/s Ratio Perm	c0.57		0.06	0.14		0.03	c0.67			0.06		
v/c Ratio	1.36	0.33	0.14	0.34	0.99	0.08	2.97	0.44		0.27	0.61	
Uniform Delay, d1	35.1	21.9	20.0	14.4	32.6	19.4	32.4	37.4		29.8	40.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	184.2	0.1	0.1	0.4	21.7	0.0	898.2	0.4		0.5	1.5	
Delay (s)	219.4	22.0	20.1	14.8	54.3	19.5	930.6	37.7		30.2	41.9	
Level of Service	F	C	C	B	D	B	F	D		C	D	
Approach Delay (s)		86.6			48.3			645.8			40.3	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM Average Control Delay	204.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	114.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	128.5%	ICU Level of Service	H
Analysis Period (min)	15		

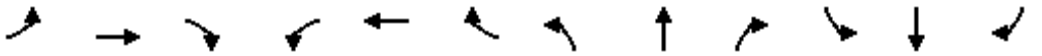
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1422	164	388	774	0	0	0	0	990	0	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.0	4.0					2.5	2.5	2.5
Lane Util. Factor		0.91	1.00	0.97	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		5136	1599	3433	3539					1698	1698	1599
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		5136	1599	3433	3539					1698	1698	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1497	173	408	815	0	0	0	0	1042	0	434
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	165
Lane Group Flow (vph)	0	1497	173	408	815	0	0	0	0	521	521	269
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4							5 6		5 6
Actuated Green, G (s)		36.0	36.0	37.0	79.0					31.0	31.0	31.0
Effective Green, g (s)		38.0	38.0	39.0	76.5					32.5	32.5	32.5
Actuated g/C Ratio		0.32	0.32	0.32	0.64					0.27	0.27	0.27
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1626	506	1116	2256					460	460	433
v/s Ratio Prot		c0.29		c0.12	c0.23							
v/s Ratio Perm			0.11							c0.31	0.31	0.17
v/c Ratio		0.92	0.34	0.37	0.36					1.13	1.13	0.62
Uniform Delay, d1		39.5	31.4	31.0	10.2					43.8	43.8	38.4
Progression Factor		0.69	0.64	0.12	0.27					1.00	1.00	1.00
Incremental Delay, d2		6.1	0.3	0.1	0.1					83.5	83.5	2.8
Delay (s)		33.5	20.5	3.9	2.9					127.3	127.3	41.1
Level of Service		C	C	A	A					F	F	D
Approach Delay (s)		32.1			3.2			0.0			102.0	
Approach LOS		C			A			A			F	

Intersection Summary			
HCM Average Control Delay	47.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

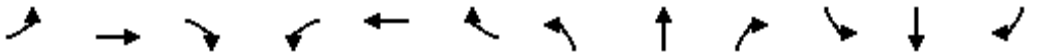
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	271	2077	0	0	827	541	269	0	734	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			4.0	2.0		4.5	4.5			
Lane Util. Factor	1.00	0.91			0.91	1.00		1.00	0.88			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	5136			5136	1599		1787	2814			
Flt Permitted	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1787	5136			5136	1599		1787	2814			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	298	2282	0	0	909	595	296	0	807	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	298	2282	0	0	909	595	0	296	807	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Prot					Free	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases						Free	2 3		2 3			
Actuated Green, G (s)	41.0	71.0			26.0	120.0		36.5	36.5			
Effective Green, g (s)	42.0	66.0			26.0	120.0		38.0	38.0			
Actuated g/C Ratio	0.35	0.55			0.22	1.00		0.32	0.32			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	625	2825			1113	1599		566	891			
v/s Ratio Prot	0.17	c0.44			c0.18							
v/s Ratio Perm						0.37		0.17	c0.29			
v/c Ratio	0.48	0.81			0.82	0.37		0.52	0.91			
Uniform Delay, d1	30.4	21.9			44.7	0.0		33.6	39.3			
Progression Factor	0.20	0.09			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.2	0.4			4.7	0.7		0.9	12.6			
Delay (s)	6.3	2.4			49.5	0.7		34.5	51.9			
Level of Service	A	A			D	A		C	D			
Approach Delay (s)		2.8			30.2			47.2			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		

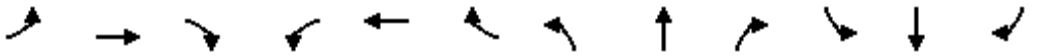
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1036	49	173	603	390	55	156	186	383	138	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599		3300		1698	1746	1599
Flt Permitted	0.36	1.00	1.00	0.08	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (perm)	674	3574	1599	155	3574	1599		3300		1698	1746	1599
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	122	1102	52	184	641	415	59	166	198	407	147	60
RTOR Reduction (vph)	0	0	15	0	0	206	0	140	0	0	0	43
Lane Group Flow (vph)	122	1102	37	184	641	209	0	283	0	273	281	17
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	49.4	43.4	43.4	60.5	49.5	49.5		15.2		21.3	21.3	21.3
Effective Green, g (s)	51.4	46.4	46.4	61.5	52.5	52.5		19.2		25.3	25.3	25.3
Actuated g/C Ratio	0.43	0.39	0.39	0.51	0.44	0.44		0.16		0.21	0.21	0.21
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	354	1382	618	258	1564	700		528		358	368	337
v/s Ratio Prot	0.02	c0.31		c0.08	0.18			c0.09		0.16	c0.16	
v/s Ratio Perm	0.13		0.02	0.29		0.13						0.01
v/c Ratio	0.34	0.80	0.06	0.71	0.41	0.30		0.54		0.76	0.76	0.05
Uniform Delay, d1	21.2	32.6	23.1	27.5	23.1	21.8		46.3		44.5	44.5	37.8
Progression Factor	1.00	1.00	1.00	1.68	0.46	0.22		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	4.9	0.2	8.1	0.7	1.0		1.0		9.3	9.1	0.1
Delay (s)	21.8	37.5	23.3	54.3	11.3	5.8		47.4		53.8	53.6	37.8
Level of Service	C	D	C	D	B	A		D		D	D	D
Approach Delay (s)		35.4			15.8			47.4			52.2	
Approach LOS		D			B			D			D	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

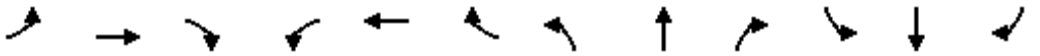
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	323	1788	942	338	577	141	316	322	148	148	448	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3405		1787	3387	
Flt Permitted	0.31	1.00	1.00	0.08	1.00	1.00	0.17	1.00		0.33	1.00	
Satd. Flow (perm)	585	3574	1599	158	3574	1599	327	3405		624	3387	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	336	1862	981	352	601	147	329	335	154	154	467	250
RTOR Reduction (vph)	0	0	181	0	0	91	0	42	0	0	56	0
Lane Group Flow (vph)	336	1862	800	352	601	56	329	447	0	154	661	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	55.0	45.0	45.0	55.0	45.0	45.0	44.0	34.0		44.0	34.0	
Effective Green, g (s)	60.0	48.5	48.5	60.0	48.5	48.5	49.0	37.5		49.0	37.5	
Actuated g/C Ratio	0.47	0.38	0.38	0.47	0.38	0.38	0.39	0.30		0.39	0.30	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	395	1365	611	235	1365	611	270	1005		355	1000	
v/s Ratio Prot	0.08	0.52		c0.15	0.17		c0.12	0.13		0.04	0.20	
v/s Ratio Perm	0.32		0.50	c0.56		0.04	c0.35			0.12		
v/c Ratio	0.85	1.36	1.31	1.50	0.44	0.09	1.22	0.44		0.43	0.66	
Uniform Delay, d1	25.4	39.2	39.2	38.3	29.2	25.1	32.7	36.3		26.8	39.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.9	168.6	150.6	245.1	0.2	0.1	127.1	1.4		0.9	3.4	
Delay (s)	41.4	207.9	189.9	283.4	29.4	25.2	159.8	37.7		27.6	42.6	
Level of Service	D	F	F	F	C	C	F	D		C	D	
Approach Delay (s)		184.7			110.1			86.8			40.0	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM Average Control Delay	136.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	127.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		

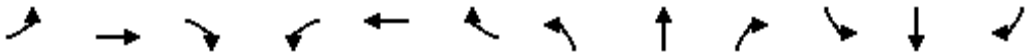
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	515	224	552	867	0	0	0	0	517	0	305
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	3.5	3.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3574	1599	1787	3574					1698	1698	1599
Flt Permitted		1.00	1.00	0.39	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3574	1599	725	3574					1698	1698	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	560	243	600	942	0	0	0	0	562	0	332
RTOR Reduction (vph)	0	0	132	0	0	0	0	0	0	0	0	287
Lane Group Flow (vph)	0	560	111	600	942	0	0	0	0	281	281	45
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		6	6						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		37.0	37.0	57.5	20.5					10.0	10.0	10.0
Effective Green, g (s)		39.0	39.0	61.5	22.5					11.5	11.5	11.5
Actuated g/C Ratio		0.46	0.46	0.72	0.26					0.14	0.14	0.14
Clearance Time (s)		6.0	6.0	5.5	5.5					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)		1640	734	806	946					230	230	216
v/s Ratio Prot		0.16		0.20	c0.26							
v/s Ratio Perm			0.07	c0.34						c0.17	0.17	0.03
v/c Ratio		0.34	0.15	0.74	1.00					1.22	1.22	0.21
Uniform Delay, d1		14.8	13.4	11.4	31.2					36.8	36.8	32.7
Progression Factor		0.92	1.86	1.12	0.72					1.00	1.00	1.00
Incremental Delay, d2		0.5	0.4	1.5	18.9					132.3	132.3	0.5
Delay (s)		14.1	25.3	14.2	41.2					169.1	169.1	33.2
Level of Service		B	C	B	D					F	F	C
Approach Delay (s)		17.5			30.7			0.0			118.6	
Approach LOS		B			C			A			F	

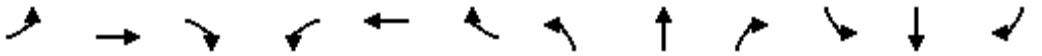
Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	11.5
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	309	736	0	0	1347	1092	100	0	276	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1780	3574			3574	1599		1787	1599			
Flt Permitted	0.11	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	197	3574			3574	1599		1787	1599			
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	347	827	0	0	1513	1227	112	0	310	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	341	0	0	216	0	0	0
Lane Group Flow (vph)	347	827	0	0	1513	886	0	112	94	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bus Blockages (#/hr)	1	0	0	0	0	0	0	0	0	0	0	0
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1	1 2			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	56.7	62.7			37.0	37.0		10.8	10.8			
Effective Green, g (s)	58.7	63.7			39.0	39.0		12.3	12.3			
Actuated g/C Ratio	0.69	0.75			0.46	0.46		0.14	0.14			
Clearance Time (s)	6.0				6.0	6.0		5.5	5.5			
Vehicle Extension (s)	3.0				3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	522	2678			1640	734		259	231			
v/s Ratio Prot	c0.16	0.23			0.42							
v/s Ratio Perm	0.30					c0.55		0.06	0.06			
v/c Ratio	0.66	0.31			0.92	1.21		0.43	0.41			
Uniform Delay, d1	19.5	3.5			21.6	23.0		33.2	33.0			
Progression Factor	1.94	0.29			1.00	1.00		1.00	1.00			
Incremental Delay, d2	3.0	0.0			10.1	105.8		1.2	1.2			
Delay (s)	40.9	1.1			31.7	128.8		34.3	34.2			
Level of Service	D	A			C	F		C	C			
Approach Delay (s)		12.8			75.2			34.2			0.0	
Approach LOS		B			E			C			A	

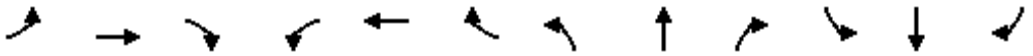
Intersection Summary			
HCM Average Control Delay	54.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	103.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	392	14	122	810	230	76	105	101	240	75	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (prot)	1787	3574	1599	1770	3539	1583		3338		1698	1741	1599
Flt Permitted	0.16	1.00	1.00	0.39	1.00	1.00		0.99		0.95	0.97	1.00
Satd. Flow (perm)	309	3574	1599	717	3539	1583		3338		1698	1741	1599
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	436	16	136	900	256	84	117	112	267	83	42
RTOR Reduction (vph)	0	0	11	0	0	121	0	92	0	0	0	33
Lane Group Flow (vph)	61	436	5	136	900	135	0	221	0	174	176	9
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	30.4	25.7	25.7	35.2	28.1	28.1		10.9		13.3	13.3	13.3
Effective Green, g (s)	32.4	28.7	28.7	37.2	31.1	31.1		14.9		17.3	17.3	17.3
Actuated g/C Ratio	0.38	0.34	0.34	0.44	0.37	0.37		0.18		0.20	0.20	0.20
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	217	1207	540	414	1295	579		585		346	354	325
v/s Ratio Prot	0.02	0.12		c0.03	c0.25			c0.07		c0.10	0.10	
v/s Ratio Perm	0.09		0.00	0.11		0.09						0.01
v/c Ratio	0.28	0.36	0.01	0.33	0.69	0.23		0.38		0.50	0.50	0.03
Uniform Delay, d1	17.9	21.2	18.7	14.9	22.9	18.7		31.0		30.0	30.0	27.1
Progression Factor	1.00	1.00	1.00	0.33	0.34	0.05		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.7	0.8	0.0	0.2	1.3	0.4		0.4		1.2	1.1	0.0
Delay (s)	18.6	22.1	18.7	5.1	9.0	1.3		31.4		31.2	31.1	27.1
Level of Service	B	C	B	A	A	A		C		C	C	C
Approach Delay (s)		21.6			7.1			31.4			30.7	
Approach LOS		C			A			C			C	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	85.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

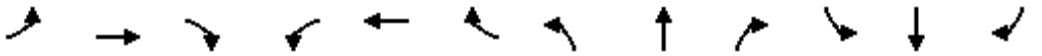
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	335	477	206	159	1423	113	746	280	70	85	253	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3468		1787	3294	
Flt Permitted	0.08	1.00	1.00	0.39	1.00	1.00	0.17	1.00		0.43	1.00	
Satd. Flow (perm)	158	3574	1599	739	3574	1599	317	3468		804	3294	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	356	507	219	169	1514	120	794	298	74	90	269	295
RTOR Reduction (vph)	0	0	126	0	0	69	0	18	0	0	134	0
Lane Group Flow (vph)	356	507	93	169	1514	51	794	354	0	90	430	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	55.1	45.1	45.1	55.1	45.1	45.1	33.1	23.1		28.9	21.0	
Effective Green, g (s)	60.1	48.6	48.6	60.1	48.6	48.6	38.1	26.6		33.9	24.5	
Actuated g/C Ratio	0.53	0.43	0.43	0.53	0.43	0.43	0.33	0.23		0.30	0.21	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	262	1522	681	504	1522	681	267	808		328	707	
v/s Ratio Prot	c0.15	0.14		0.04	0.42		c0.33	0.10		0.02	0.13	
v/s Ratio Perm	c0.57		0.06	0.14		0.03	c0.67			0.06		
v/c Ratio	1.36	0.33	0.14	0.34	0.99	0.08	2.97	0.44		0.27	0.61	
Uniform Delay, d1	35.1	21.9	20.0	14.4	32.6	19.4	32.4	37.4		29.8	40.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	184.2	0.6	0.4	0.4	21.9	0.2	898.2	0.4		0.5	1.5	
Delay (s)	219.4	22.5	20.4	14.8	54.5	19.6	930.6	37.7		30.2	41.9	
Level of Service	F	C	C	B	D	B	F	D		C	D	
Approach Delay (s)		86.9			48.4			645.8			40.3	
Approach LOS		F			D			F			D	

Intersection Summary			
HCM Average Control Delay	204.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	114.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	128.5%	ICU Level of Service	H
Analysis Period (min)	15		

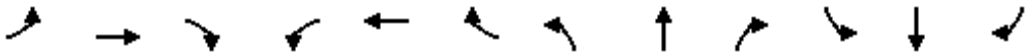
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1422	164	388	774	0	0	0	0	990	0	412
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	3.5	3.5					4.5	4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3574	1599	1770	3539					1698	1698	1599
Flt Permitted		1.00	1.00	0.09	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3574	1599	173	3539					1698	1698	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1497	173	408	815	0	0	0	0	1042	0	434
RTOR Reduction (vph)	0	0	44	0	0	0	0	0	0	0	0	250
Lane Group Flow (vph)	0	1497	129	408	815	0	0	0	0	521	521	184
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		6	6						8	
Permitted Phases			16	16						8		8
Actuated Green, G (s)		41.0	41.0	66.6	25.6					35.9	35.9	35.9
Effective Green, g (s)		43.0	43.0	70.6	27.6					37.4	37.4	37.4
Actuated g/C Ratio		0.36	0.36	0.59	0.23					0.31	0.31	0.31
Clearance Time (s)		6.0	6.0	5.5	5.5					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)		1281	573	469	814					529	529	498
v/s Ratio Prot		c0.42		0.20	c0.23							
v/s Ratio Perm			0.08	0.31						c0.31	0.31	0.12
v/c Ratio		1.17	0.23	0.87	1.00					0.98	0.98	0.37
Uniform Delay, d1		38.5	26.9	40.9	46.2					41.0	41.0	32.1
Progression Factor		0.69	0.44	0.68	0.64					1.00	1.00	1.00
Incremental Delay, d2		81.7	0.6	12.2	28.4					35.0	35.0	0.5
Delay (s)		108.4	12.4	39.8	58.2					76.0	76.0	32.6
Level of Service		F	B	D	E					E	E	C
Approach Delay (s)		98.5			52.1			0.0			63.2	
Approach LOS		F			D			A			E	

Intersection Summary			
HCM Average Control Delay	73.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		

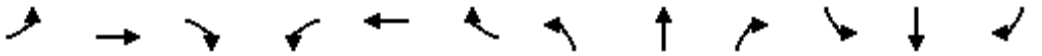
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	271	2077	0	0	827	541	269	0	734	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1787	3574			3574	1599		1787	1599			
Flt Permitted	0.14	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	255	3574			3574	1599		1787	1599			
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	298	2282	0	0	909	595	296	0	807	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	382	0	0	3	0	0	0
Lane Group Flow (vph)	298	2282	0	0	909	213	0	296	804	0	0	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	1	1 2			2			12				
Permitted Phases	2					2	12		12			
Actuated Green, G (s)	60.0	66.0			41.0	41.0		42.5	42.5			
Effective Green, g (s)	62.0	67.0			43.0	43.0		44.0	44.0			
Actuated g/C Ratio	0.52	0.56			0.36	0.36		0.37	0.37			
Clearance Time (s)	6.0				6.0	6.0		5.5	5.5			
Vehicle Extension (s)	3.0				3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	387	1995			1281	573		655	586			
v/s Ratio Prot	0.13	c0.64			0.25							
v/s Ratio Perm	0.27					0.13		0.17	c0.50			
v/c Ratio	0.77	1.14			0.71	0.37		0.45	1.37			
Uniform Delay, d1	25.0	26.5			33.1	28.5		28.8	38.0			
Progression Factor	1.97	0.56			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.9	65.4			3.3	1.8		0.5	178.4			
Delay (s)	50.1	80.3			36.5	30.4		29.3	216.4			
Level of Service	D	F			D	C		C	F			
Approach Delay (s)		76.8			34.1			166.2			0.0	
Approach LOS		E			C			F			A	

Intersection Summary			
HCM Average Control Delay	83.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	110.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1036	49	173	603	390	55	156	186	383	138	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599		3300		1698	1746	1599
Flt Permitted	0.34	1.00	1.00	0.08	1.00	1.00		0.99		0.95	0.98	1.00
Satd. Flow (perm)	637	3574	1599	153	3574	1599		3300		1698	1746	1599
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	122	1102	52	184	641	415	59	166	198	407	147	60
RTOR Reduction (vph)	0	0	16	0	0	207	0	96	0	0	0	44
Lane Group Flow (vph)	122	1102	36	184	641	208	0	327	0	273	281	16
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Split			Split		Perm
Protected Phases	1	6		5	2		3	3		4	4	
Permitted Phases	6		6	2		2						4
Actuated Green, G (s)	50.2	44.2	44.2	58.4	48.3	48.3		16.6		21.1	21.1	21.1
Effective Green, g (s)	52.2	47.2	47.2	60.3	51.3	51.3		20.6		25.1	25.1	25.1
Actuated g/C Ratio	0.44	0.39	0.39	0.50	0.43	0.43		0.17		0.21	0.21	0.21
Clearance Time (s)	5.0	7.0	7.0	5.0	7.0	7.0		8.0		8.0	8.0	8.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	344	1406	629	228	1528	684		567		355	365	334
v/s Ratio Prot	0.02	0.31		c0.07	0.18			c0.10		0.16	c0.16	
v/s Ratio Perm	0.13		0.02	c0.33		0.13						0.01
v/c Ratio	0.35	0.78	0.06	0.81	0.42	0.30		0.58		0.77	0.77	0.05
Uniform Delay, d1	20.9	31.9	22.6	28.8	24.0	22.6		45.7		44.7	44.7	37.9
Progression Factor	1.00	1.00	1.00	0.50	0.93	3.17		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.6	4.4	0.2	9.9	0.4	0.6		1.4		9.6	9.4	0.1
Delay (s)	21.5	36.4	22.8	24.1	22.7	72.1		47.1		54.4	54.2	38.0
Level of Service	C	D	C	C	C	E		D		D	D	D
Approach Delay (s)		34.4			39.5			47.1			52.7	
Approach LOS		C			D			D			D	

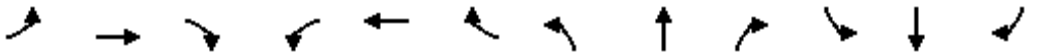
Intersection Summary			
HCM Average Control Delay	40.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	323	1788	942	338	577	141	316	322	148	148	448	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	3574	1599	1787	3574	1599	1787	3405		1787	3387	
Flt Permitted	0.32	1.00	1.00	0.08	1.00	1.00	0.14	1.00		0.31	1.00	
Satd. Flow (perm)	605	3574	1599	158	3574	1599	257	3405		575	3387	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	336	1862	981	352	601	147	329	335	154	154	467	250
RTOR Reduction (vph)	0	0	176	0	0	88	0	44	0	0	58	0
Lane Group Flow (vph)	336	1862	805	352	601	59	329	445	0	154	659	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	55.1	45.1	45.1	55.1	45.1	45.1	38.4	28.4		38.4	28.4	
Effective Green, g (s)	60.1	48.6	48.6	60.1	48.6	48.6	43.4	31.9		43.4	31.9	
Actuated g/C Ratio	0.49	0.40	0.40	0.49	0.40	0.40	0.36	0.26		0.36	0.26	
Clearance Time (s)	6.5	7.5	7.5	6.5	7.5	7.5	6.5	7.5		6.5	7.5	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	421	1430	640	246	1430	640	249	894		330	889	
v/s Ratio Prot	0.08	0.52		c0.15	0.17		c0.14	0.13		0.05	0.19	
v/s Ratio Perm	0.31		0.50	c0.56		0.04	c0.34			0.12		
v/c Ratio	0.80	1.30	1.26	1.43	0.42	0.09	1.32	0.50		0.47	0.74	
Uniform Delay, d1	21.4	36.5	36.5	37.0	26.3	22.7	31.9	38.0		28.1	41.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.1	141.2	128.5	215.7	0.9	0.3	169.9	0.4		1.0	3.4	
Delay (s)	31.5	177.6	165.0	252.7	27.2	23.0	201.7	38.4		29.1	44.4	
Level of Service	C	F	F	F	C	C	F	D		C	D	
Approach Delay (s)		158.3			98.8			104.1			41.7	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM Average Control Delay	122.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	121.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.1%	ICU Level of Service	H
Analysis Period (min)	15		

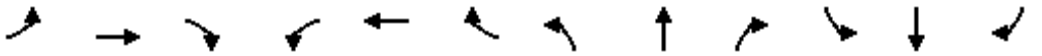
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	250	0	380	155	925	0	0	630	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1681	1583	1787	3574			3539	1583
Flt Permitted				0.95	0.95	1.00	0.21	1.00			1.00	1.00
Satd. Flow (perm)				1681	1681	1583	400	3574			3539	1583
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	0	0	301	0	458	187	1114	0	0	759	410
RTOR Reduction (vph)	0	0	0	0	0	115	0	0	0	0	0	267
Lane Group Flow (vph)	0	0	0	150	151	343	187	1114	0	0	759	144
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type				Perm		Perm	D.P+P					Perm
Protected Phases					2 3		4 5	1 4 5 6			1 6	
Permitted Phases				2 3		2 3	1 6					1 6
Actuated Green, G (s)				18.0	18.0	18.0	65.0	70.0			33.0	33.0
Effective Green, g (s)				19.0	19.0	19.0	69.0	69.0			35.0	35.0
Actuated g/C Ratio				0.19	0.19	0.19	0.69	0.69			0.35	0.35
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)				319	319	301	748	2466			1239	554
v/s Ratio Prot							0.09	c0.31			c0.21	
v/s Ratio Perm				0.09	0.09	c0.22	0.09					0.09
v/c Ratio				0.47	0.47	1.14	0.25	0.45			0.61	0.26
Uniform Delay, d1				36.0	36.0	40.5	6.8	7.0			26.9	23.2
Progression Factor				1.00	1.00	1.00	0.11	0.10			1.03	2.07
Incremental Delay, d2				1.1	1.1	95.0	0.2	0.1			0.9	0.2
Delay (s)				37.1	37.2	135.5	0.9	0.8			28.5	48.4
Level of Service				D	D	F	A	A			C	D
Approach Delay (s)		0.0			96.5			0.8			35.5	
Approach LOS		A			F			A			D	

Intersection Summary			
HCM Average Control Delay	35.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

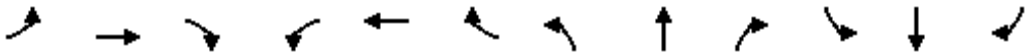
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	375	0	360	0	0	0	0	700	260	180	700	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3574	1599	1787	3574	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.19	1.00	
Satd. Flow (perm)	1681	1681	1583					3574	1599	364	3574	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	426	0	409	0	0	0	0	795	295	205	795	0
RTOR Reduction (vph)	0	0	210	0	0	0	0	0	192	0	0	0
Lane Group Flow (vph)	213	213	199	0	0	0	0	795	103	205	795	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Perm						Perm	D.P+P		
Protected Phases		5 6						3 4		1 2	1 2	
Permitted Phases	5 6		5 6						3 4	3 4	3 4	
Actuated Green, G (s)	18.0	18.0	18.0					33.0	33.0	65.0	65.0	
Effective Green, g (s)	19.0	19.0	19.0					35.0	35.0	69.0	69.0	
Actuated g/C Ratio	0.19	0.19	0.19					0.35	0.35	0.69	0.69	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	319	319	301					1251	560	735	2466	
v/s Ratio Prot								c0.22		0.09	c0.11	
v/s Ratio Perm	c0.13	0.13	0.13						0.06	0.10	0.11	
v/c Ratio	0.67	0.67	0.66					0.64	0.18	0.28	0.32	
Uniform Delay, d1	37.6	37.6	37.5					27.2	22.6	7.2	6.2	
Progression Factor	1.00	1.00	1.00					0.73	0.54	0.03	0.04	
Incremental Delay, d2	5.2	5.2	5.4					0.8	0.1	0.2	0.1	
Delay (s)	42.8	42.8	42.9					20.5	12.2	0.4	0.3	
Level of Service	D	D	D					C	B	A	A	
Approach Delay (s)		42.8			0.0			18.3			0.3	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.8%	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												
Volume (vph)	240	100	30	55	80	70	30	650	55	375	600	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected		0.97	1.00		0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1817	1599		1844	1599	1787	3533		1752	3437	
Flt Permitted		0.61	1.00		0.35	1.00	0.35	1.00		0.23	1.00	
Satd. Flow (perm)		1148	1599		650	1599	662	3533		433	3437	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	276	115	34	63	92	80	34	747	63	431	690	103
RTOR Reduction (vph)	0	0	20	0	0	60	0	6	0	0	11	0
Lane Group Flow (vph)	0	391	14	0	155	20	34	804	0	431	782	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2			6		
Actuated Green, G (s)		23.5	23.5		23.5	23.5	49.7	45.8		65.5	56.6	
Effective Green, g (s)		25.0	25.0		25.0	25.0	51.7	47.3		66.5	58.1	
Actuated g/C Ratio		0.25	0.25		0.25	0.25	0.52	0.47		0.66	0.58	
Clearance Time (s)		5.5	5.5		5.5	5.5	5.0	5.5		5.0	5.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		287	400		163	400	397	1671		495	1997	
v/s Ratio Prot							0.00	0.23		c0.14	0.23	
v/s Ratio Perm		c0.34	0.01		0.24	0.01	0.04			c0.44		
v/c Ratio		1.36	0.03		0.95	0.05	0.09	0.48		0.87	0.39	
Uniform Delay, d1		37.5	28.4		36.9	28.5	11.9	18.0		11.6	11.4	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		1.12	0.52	
Incremental Delay, d2		184.0	0.0		55.8	0.1	0.1	1.0		14.1	0.5	
Delay (s)		221.5	28.4		92.7	28.5	12.0	19.0		27.0	6.5	
Level of Service		F	C		F	C	B	B		C	A	
Approach Delay (s)		206.0			70.9			18.7			13.7	
Approach LOS		F			E			B			B	

Intersection Summary			
HCM Average Control Delay	50.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

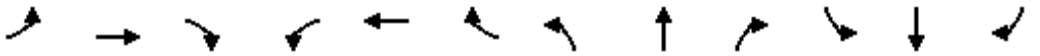
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	270	45	960	345	55	700
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.98		0.96		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3425		3432		1787	3574
Flt Permitted	0.96		1.00		0.09	1.00
Satd. Flow (perm)	3425		3432		160	3574
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	325	54	1157	416	66	843
RTOR Reduction (vph)	16	0	29	0	0	0
Lane Group Flow (vph)	363	0	1544	0	66	843
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type					pm+pt	
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	15.8		61.2		71.2	71.2
Effective Green, g (s)	18.3		63.7		71.7	73.7
Actuated g/C Ratio	0.18		0.64		0.72	0.74
Clearance Time (s)	6.5		6.5		4.5	6.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	627		2186		212	2634
v/s Ratio Prot	c0.11		c0.45		0.02	c0.24
v/s Ratio Perm					0.20	
v/c Ratio	0.58		0.71		0.31	0.32
Uniform Delay, d1	37.3		12.0		10.3	4.5
Progression Factor	1.00		0.46		1.00	1.00
Incremental Delay, d2	1.3		1.5		0.8	0.3
Delay (s)	38.6		7.0		11.1	4.8
Level of Service	D		A		B	A
Approach Delay (s)	38.6		7.0			5.3
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

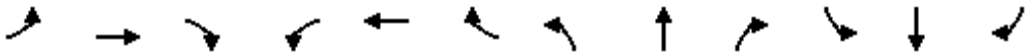
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	225	0	165	315	825	0	0	840	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1698	1698	1599	1787	3574			3539	1583
Flt Permitted				0.95	0.95	1.00	0.12	1.00			1.00	1.00
Satd. Flow (perm)				1698	1698	1599	232	3574			3539	1583
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	253	0	185	354	927	0	0	944	365
RTOR Reduction (vph)	0	0	0	0	0	150	0	0	0	0	0	237
Lane Group Flow (vph)	0	0	0	126	127	35	354	927	0	0	944	128
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type				Perm		Perm	D.P+P					Perm
Protected Phases					2 3		4 5	1 4 5 6			1 6	
Permitted Phases				2 3		2 3	1 6					1 6
Actuated Green, G (s)				18.0	18.0	18.0	65.0	70.0			33.0	33.0
Effective Green, g (s)				19.0	19.0	19.0	69.0	69.0			35.0	35.0
Actuated g/C Ratio				0.19	0.19	0.19	0.69	0.69			0.35	0.35
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)				323	323	304	689	2466			1239	554
v/s Ratio Prot							c0.17	0.26			c0.27	
v/s Ratio Perm				0.07	0.07	0.02	0.18					0.08
v/c Ratio				0.39	0.39	0.12	0.51	0.38			0.76	0.23
Uniform Delay, d1				35.4	35.5	33.5	15.4	6.5			28.8	23.0
Progression Factor				1.00	1.00	1.00	0.05	0.07			1.01	2.04
Incremental Delay, d2				0.8	0.8	0.2	0.6	0.1			2.7	0.2
Delay (s)				36.2	36.2	33.7	1.3	0.5			31.8	47.1
Level of Service				D	D	C	A	A			C	D
Approach Delay (s)		0.0			35.2			0.7			36.1	
Approach LOS		A			D			A			D	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		

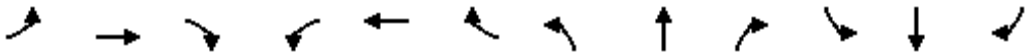
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	395	0	195	0	0	0	0	745	265	395	665	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1698	1698	1599					3574	1599	1787	3574	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.19	1.00	
Satd. Flow (perm)	1698	1698	1599					3574	1599	364	3574	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	420	0	207	0	0	0	0	793	282	420	707	0
RTOR Reduction (vph)	0	0	167	0	0	0	0	0	184	0	0	0
Lane Group Flow (vph)	210	210	40	0	0	0	0	793	98	420	707	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Perm						Perm	D.P+P		
Protected Phases		5 6						3 4		1 2	1 2	
Permitted Phases	5 6		5 6						3 4	3 4	3 4	
Actuated Green, G (s)	18.2	18.2	18.2					32.8	32.8	64.8	64.8	
Effective Green, g (s)	19.2	19.2	19.2					34.8	34.8	68.8	68.8	
Actuated g/C Ratio	0.19	0.19	0.19					0.35	0.35	0.69	0.69	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	326	326	307					1244	556	734	2459	
v/s Ratio Prot								c0.22		c0.19	0.10	
v/s Ratio Perm	c0.12	0.12	0.02						0.06	0.20	0.10	
v/c Ratio	0.64	0.64	0.13					0.64	0.18	0.57	0.29	
Uniform Delay, d1	37.3	37.3	33.5					27.3	22.6	11.5	6.1	
Progression Factor	1.00	1.00	1.00					0.71	0.28	0.04	0.02	
Incremental Delay, d2	4.3	4.3	0.2					1.0	0.1	0.7	0.0	
Delay (s)	41.6	41.6	33.7					20.4	6.5	1.1	0.2	
Level of Service	D	D	C					C	A	A	A	
Approach Delay (s)		39.0			0.0			16.7			0.5	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.4%	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												
Volume (vph)	225	30	60	25	15	70	60	715	55	130	640	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected		0.96	1.00		0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1767	1568		1806	1583	1736	3434		1687	3309	
Flt Permitted		0.72	1.00		0.72	1.00	0.30	1.00		0.26	1.00	
Satd. Flow (perm)		1329	1568		1339	1583	547	3434		455	3309	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	245	33	65	27	16	76	65	777	60	141	696	103
RTOR Reduction (vph)	0	0	48	0	0	56	0	5	0	0	10	0
Lane Group Flow (vph)	0	278	17	0	43	20	65	832	0	141	789	0
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	7%	7%	7%
Turn Type	Perm		Perm	Perm		Perm	pm+pt			pm+pt		
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8		8	4		4	2			6		
Actuated Green, G (s)		24.4	24.4		24.4	24.4	57.6	51.9		61.6	53.9	
Effective Green, g (s)		25.9	25.9		25.9	25.9	59.6	53.4		63.6	55.4	
Actuated g/C Ratio		0.26	0.26		0.26	0.26	0.60	0.53		0.64	0.55	
Clearance Time (s)		5.5	5.5		5.5	5.5	5.0	5.5		5.0	5.5	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		344	406		347	410	406	1834		397	1833	
v/s Ratio Prot							0.01	c0.24		c0.03	0.24	
v/s Ratio Perm		c0.21	0.01		0.03	0.01	0.08			0.20		
v/c Ratio		0.81	0.04		0.12	0.05	0.16	0.45		0.36	0.43	
Uniform Delay, d1		34.7	27.8		28.4	27.8	8.8	14.3		8.4	13.1	
Progression Factor		1.00	1.00		1.00	1.00	1.00	1.00		0.36	0.33	
Incremental Delay, d2		13.0	0.0		0.2	0.0	0.2	0.8		0.5	0.7	
Delay (s)		47.7	27.8		28.5	27.8	9.0	15.1		3.5	5.0	
Level of Service		D	C		C	C	A	B		A	A	
Approach Delay (s)		44.0			28.1			14.7			4.8	
Approach LOS		D			C			B			A	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

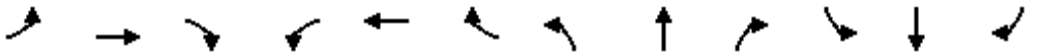
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	435	50	640	350	45	725
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.98		0.95		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3439		3385		1787	3574
Flt Permitted	0.96		1.00		0.21	1.00
Satd. Flow (perm)	3439		3385		393	3574
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	448	52	660	361	46	747
RTOR Reduction (vph)	9	0	62	0	0	0
Lane Group Flow (vph)	491	0	959	0	46	747
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type					pm+pt	
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	19.2		59.2		67.8	67.8
Effective Green, g (s)	21.7		61.7		68.3	70.3
Actuated g/C Ratio	0.22		0.62		0.68	0.70
Clearance Time (s)	6.5		6.5		4.5	6.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	746		2089		333	2513
v/s Ratio Prot	c0.14		c0.28		0.01	c0.21
v/s Ratio Perm					0.09	
v/c Ratio	0.66		0.46		0.14	0.30
Uniform Delay, d1	35.8		10.2		6.6	5.6
Progression Factor	1.00		0.18		1.00	1.00
Incremental Delay, d2	2.1		0.7		0.2	0.3
Delay (s)	37.9		2.6		6.8	5.9
Level of Service	D		A		A	A
Approach Delay (s)	37.9		2.6			5.9
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	11.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

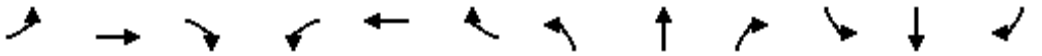
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	346	0	615	165	1248	0	0	1320	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0	3.0	4.0	4.0			2.0	2.0
Lane Util. Factor				0.95	0.95	0.88	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1681	2787	1787	3574			3539	1583
Flt Permitted				0.95	0.95	1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)				1681	1681	2787	193	3574			3539	1583
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	0	0	417	0	741	199	1504	0	0	1590	578
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	370
Lane Group Flow (vph)	0	0	0	208	209	741	199	1504	0	0	1590	208
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type				Perm		Prot	D.P+P					Perm
Protected Phases					5 6	5 6	1 2	1 2 3 4			3 4	
Permitted Phases				5 6			3 4					3 4
Actuated Green, G (s)				32.0	32.0	32.0	71.0	76.0			39.0	39.0
Effective Green, g (s)				33.0	33.0	33.0	73.0	73.0			41.0	41.0
Actuated g/C Ratio				0.28	0.28	0.28	0.61	0.61			0.34	0.34
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)				462	462	766	569	2174			1209	541
v/s Ratio Prot						c0.27	0.10	c0.42			c0.45	
v/s Ratio Perm				0.12	0.12		0.11					0.13
v/c Ratio				0.45	0.45	0.97	0.35	0.69			1.32	0.38
Uniform Delay, d1				36.0	36.0	43.0	16.6	15.9			39.5	29.9
Progression Factor				1.00	1.00	1.00	0.07	0.20			0.95	1.22
Incremental Delay, d2				0.7	0.7	24.5	0.2	0.5			145.7	0.3
Delay (s)				36.7	36.7	67.4	1.4	3.6			183.2	36.8
Level of Service				D	D	E	A	A			F	D
Approach Delay (s)		0.0			56.4			3.4			144.2	
Approach LOS		A			E			A			F	

Intersection Summary			
HCM Average Control Delay	76.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

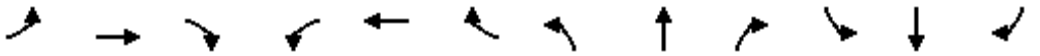
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	461	0	434	0	0	0	0	965	280	437	1286	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	0.88					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	2787					3574	1599	1787	3574	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1681	1681	2787					3574	1599	203	3574	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	524	0	493	0	0	0	0	1097	318	497	1461	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	202	0	0	0
Lane Group Flow (vph)	262	262	493	0	0	0	0	1097	116	497	1461	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Prot						Perm	D.P+P		
Protected Phases		2 3	2 3					1 6		4 5	1 4 5 6	
Permitted Phases	2 3								1 6	1 6		
Actuated Green, G (s)	24.0	24.0	24.0					35.0	35.0	82.0	86.0	
Effective Green, g (s)	25.0	25.0	25.0					37.0	37.0	86.0	86.0	
Actuated g/C Ratio	0.21	0.21	0.21					0.31	0.31	0.72	0.72	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	350	350	581					1102	493	792	2561	
v/s Ratio Prot			c0.18					c0.31		c0.26	0.41	
v/s Ratio Perm	0.16	0.16							0.07	0.19		
v/c Ratio	0.75	0.75	0.85					1.00	0.24	0.63	0.57	
Uniform Delay, d1	44.6	44.6	45.7					41.4	31.0	21.5	8.1	
Progression Factor	1.00	1.00	1.00					0.63	0.34	0.09	0.25	
Incremental Delay, d2	8.5	8.5	11.1					17.0	0.1	0.1	0.0	
Delay (s)	53.0	53.0	56.8					43.2	10.6	2.1	2.0	
Level of Service	D	D	E					D	B	A	A	
Approach Delay (s)		54.9			0.0			35.9			2.0	
Approach LOS		D			A			D			A	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

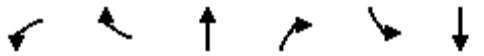
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	298	132	38	55	91	150	36	863	62	499	976	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
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	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1818			1847	1599	1787	3538		1752	3391	
Flt Permitted	0.57	1.00			0.80	1.00	0.14	1.00		0.10	1.00	
Satd. Flow (perm)	1078	1818			1511	1599	272	3538		176	3391	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	343	152	44	63	105	172	41	992	71	574	1122	311
RTOR Reduction (vph)	0	9	0	0	0	118	0	4	0	0	20	0
Lane Group Flow (vph)	343	187	0	0	168	54	41	1059	0	574	1413	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Turn Type	Perm			Perm		Perm	pm+pt			pm+pt		
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	36.1	36.1			36.1	36.1	40.9	36.9		72.9	63.9	
Effective Green, g (s)	37.6	37.6			37.6	37.6	42.9	38.4		73.9	65.4	
Actuated g/C Ratio	0.31	0.31			0.31	0.31	0.36	0.32		0.62	0.55	
Clearance Time (s)	5.5	5.5			5.5	5.5	5.0	5.5		5.0	5.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	338	570			473	501	160	1132		529	1848	
v/s Ratio Prot		0.10					0.01	0.30		c0.29	0.42	
v/s Ratio Perm	c0.32				0.11	0.03	0.08			c0.38		
v/c Ratio	1.01	0.33			0.36	0.11	0.26	0.94		1.09	0.76	
Uniform Delay, d1	41.2	31.5			31.8	29.3	25.7	39.6		36.5	21.3	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.20	0.31	
Incremental Delay, d2	52.8	0.3			0.5	0.1	0.9	15.1		59.9	2.4	
Delay (s)	94.0	31.9			32.3	29.4	26.5	54.7		103.6	9.1	
Level of Service	F	C			C	C	C	D		F	A	
Approach Delay (s)		71.4			30.8			53.7			36.1	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

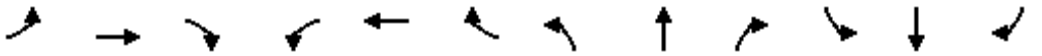
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	684	125	1320	573	86	1234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.98		0.95		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3420		3412		1787	3574
Flt Permitted	0.96		1.00		0.06	1.00
Satd. Flow (perm)	3420		3412		114	3574
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	824	151	1590	690	104	1487
RTOR Reduction (vph)	13	0	40	0	0	0
Lane Group Flow (vph)	962	0	2240	0	104	1487
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type					pm+pt	
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	34.6		61.4		72.4	72.4
Effective Green, g (s)	37.1		63.9		72.9	74.9
Actuated g/C Ratio	0.31		0.53		0.61	0.62
Clearance Time (s)	6.5		6.5		4.5	6.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1057		1817		167	2231
v/s Ratio Prot	c0.28		c0.66		0.04	c0.42
v/s Ratio Perm					0.34	
v/c Ratio	0.91		1.23		0.62	0.67
Uniform Delay, d1	39.8		28.1		26.7	14.5
Progression Factor	1.00		0.54		1.00	1.00
Incremental Delay, d2	11.5		108.1		7.0	1.6
Delay (s)	51.3		123.3		33.8	16.1
Level of Service	D		F		C	B
Approach Delay (s)	51.3		123.3			17.3
Approach LOS	D		F			B

Intersection Summary			
HCM Average Control Delay	74.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

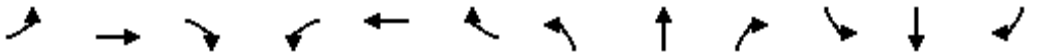
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	240	0	450	362	1571	0	0	1371	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			2.0	2.0
Lane Util. Factor				0.95	0.95	0.88	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1698	1698	2814	1787	3574			3539	1583
Flt Permitted				0.95	0.95	1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)				1698	1698	2814	188	3574			3539	1583
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	270	0	506	407	1765	0	0	1540	458
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	298
Lane Group Flow (vph)	0	0	0	135	135	506	407	1765	0	0	1540	160
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type				Perm		Prot	D.P+P					Perm
Protected Phases					5 6	5 6	1 2	1 2 3 4			3 4	
Permitted Phases				5 6			3 4					3 4
Actuated Green, G (s)				27.0	27.0	27.0	76.0	81.0			40.0	40.0
Effective Green, g (s)				28.0	28.0	28.0	78.0	78.0			42.0	42.0
Actuated g/C Ratio				0.23	0.23	0.23	0.65	0.65			0.35	0.35
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)				396	396	657	629	2323			1239	554
v/s Ratio Prot						c0.18	0.21	c0.49			c0.44	
v/s Ratio Perm				0.08	0.08		0.22					0.10
v/c Ratio				0.34	0.34	0.77	0.65	0.76			1.24	0.29
Uniform Delay, d1				38.3	38.3	43.0	26.2	14.5			39.0	28.2
Progression Factor				1.00	1.00	1.00	0.06	0.17			1.04	2.96
Incremental Delay, d2				0.5	0.5	5.6	0.2	0.1			114.7	0.2
Delay (s)				38.8	38.8	48.6	1.9	2.7			155.4	83.8
Level of Service				D	D	D	A	A			F	F
Approach Delay (s)		0.0			45.2			2.5			139.0	
Approach LOS		A			D			A			F	

Intersection Summary			
HCM Average Control Delay	64.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

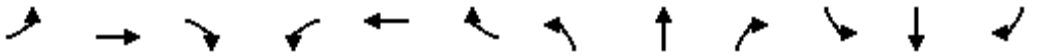
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	804	0	224	0	0	0	0	1254	311	579	993	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	0.88					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1698	1698	2814					3574	1599	1787	3574	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1698	1698	2814					3574	1599	203	3574	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	855	0	238	0	0	0	0	1334	331	616	1056	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	173	0	0	0
Lane Group Flow (vph)	427	428	238	0	0	0	0	1334	158	616	1056	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Prot						Perm	D.P+P		
Protected Phases		2 3	2 3					1 6		4 5	1 4 5 6	
Permitted Phases	2 3								1 6	1 6		
Actuated Green, G (s)	28.0	28.0	28.0					35.0	35.0	77.0	82.0	
Effective Green, g (s)	29.0	29.0	29.0					37.0	37.0	81.0	81.0	
Actuated g/C Ratio	0.24	0.24	0.24					0.31	0.31	0.68	0.68	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	410	410	680					1102	493	718	2412	
v/s Ratio Prot			0.08					c0.37		c0.31	0.30	
v/s Ratio Perm	0.25	0.25							0.10	0.26		
v/c Ratio	1.04	1.04	0.35					1.21	0.32	0.86	0.44	
Uniform Delay, d1	45.5	45.5	37.7					41.5	31.9	28.8	9.0	
Progression Factor	1.00	1.00	1.00					0.78	0.57	0.15	0.08	
Incremental Delay, d2	55.6	56.4	0.3					100.6	0.3	1.0	0.0	
Delay (s)	101.1	101.9	38.0					133.1	18.5	5.2	0.8	
Level of Service	F	F	D					F	B	A	A	
Approach Delay (s)		87.7			0.0			110.4			2.4	
Approach LOS		F			A			F			A	

Intersection Summary			
HCM Average Control Delay	64.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

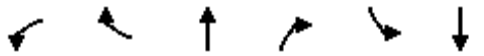
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	342	37	73	28	25	153	78	1037	59	227	916	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1661			1815	1583	1736	3443		1687	3304	
Flt Permitted	0.72	1.00			0.84	1.00	0.17	1.00		0.08	1.00	
Satd. Flow (perm)	1328	1661			1567	1583	316	3443		147	3304	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	372	40	79	30	27	166	85	1127	64	247	996	160
RTOR Reduction (vph)	0	53	0	0	0	112	0	3	0	0	10	0
Lane Group Flow (vph)	372	66	0	0	57	54	85	1188	0	247	1146	0
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	7%	7%	7%
Turn Type	Perm			Perm		Perm	pm+pt			pm+pt		
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	37.3	37.3			37.3	37.3	56.5	50.7		71.7	60.9	
Effective Green, g (s)	38.8	38.8			38.8	38.8	58.5	52.2		72.7	62.4	
Actuated g/C Ratio	0.32	0.32			0.32	0.32	0.49	0.44		0.61	0.52	
Clearance Time (s)	5.5	5.5			5.5	5.5	5.0	5.5		5.0	5.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	429	537			507	512	235	1498		307	1718	
v/s Ratio Prot		0.04					0.02	0.35		c0.11	0.35	
v/s Ratio Perm	c0.28				0.04	0.03	0.16			c0.37		
v/c Ratio	0.87	0.12			0.11	0.10	0.36	0.79		0.80	0.67	
Uniform Delay, d1	38.2	28.6			28.5	28.4	17.8	29.2		31.9	21.2	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.65	0.35	
Incremental Delay, d2	16.6	0.1			0.1	0.1	1.0	4.4		13.4	2.0	
Delay (s)	54.8	28.7			28.6	28.5	18.7	33.6		66.1	9.3	
Level of Service	D	C			C	C	B	C		E	A	
Approach Delay (s)		48.5			28.5			32.6			19.3	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM Average Control Delay	29.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

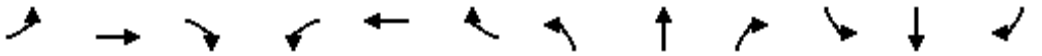
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	909	78	1118	980	129	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.99		0.93		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3448		3324		1787	3574
Flt Permitted	0.96		1.00		0.06	1.00
Satd. Flow (perm)	3448		3324		115	3574
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	937	80	1153	1010	133	963
RTOR Reduction (vph)	6	0	132	0	0	0
Lane Group Flow (vph)	1012	0	2031	0	133	963
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type					pm+pt	
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	35.0		61.0		72.0	72.0
Effective Green, g (s)	37.5		63.5		72.5	74.5
Actuated g/C Ratio	0.31		0.53		0.60	0.62
Clearance Time (s)	6.5		6.5		4.5	6.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1078		1759		167	2219
v/s Ratio Prot	c0.29		c0.61		c0.05	0.27
v/s Ratio Perm					0.44	
v/c Ratio	0.94		1.15		0.80	0.43
Uniform Delay, d1	40.1		28.2		30.9	11.8
Progression Factor	1.00		0.48		1.00	1.00
Incremental Delay, d2	14.7		74.5		22.5	0.6
Delay (s)	54.9		87.9		53.5	12.4
Level of Service	D		F		D	B
Approach Delay (s)	54.9		87.9			17.4
Approach LOS	D		F			B

Intersection Summary			
HCM Average Control Delay	62.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.9%	ICU Level of Service	G
Analysis Period (min)	15		

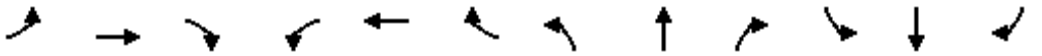
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	346	0	615	165	1248	0	0	1320	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0	3.0	4.0	4.0			2.0	2.0
Lane Util. Factor				0.95	0.95	0.88	1.00	0.95			0.91	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1681	2787	1787	3574			5085	1583
Flt Permitted				0.95	0.95	1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)				1681	1681	2787	193	3574			5085	1583
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	0	0	417	0	741	199	1504	0	0	1590	578
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	381
Lane Group Flow (vph)	0	0	0	208	209	741	199	1504	0	0	1590	197
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type				Perm		Prot	D.P+P					Perm
Protected Phases					5 6	5 6	1 2	1 2 3 4			3 4	
Permitted Phases				5 6			3 4					3 4
Actuated Green, G (s)				32.0	32.0	32.0	71.0	76.0			39.0	39.0
Effective Green, g (s)				33.0	33.0	33.0	73.0	73.0			41.0	41.0
Actuated g/C Ratio				0.28	0.28	0.28	0.61	0.61			0.34	0.34
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)				462	462	766	569	2174			1737	541
v/s Ratio Prot						c0.27	0.10	c0.42			c0.31	
v/s Ratio Perm				0.12	0.12		0.11					0.12
v/c Ratio				0.45	0.45	0.97	0.35	0.69			0.92	0.37
Uniform Delay, d1				36.0	36.0	43.0	16.6	15.9			37.8	29.7
Progression Factor				1.00	1.00	1.00	0.09	0.32			0.92	1.22
Incremental Delay, d2				0.7	0.7	24.5	0.3	0.7			5.4	0.3
Delay (s)				36.7	36.7	67.4	1.9	5.9			40.3	36.5
Level of Service				D	D	E	A	A			D	D
Approach Delay (s)		0.0			56.4			5.4			39.3	
Approach LOS		A			E			A			D	

Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

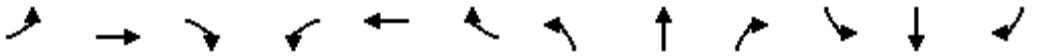
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	461	0	434	0	0	0	0	965	280	437	1286	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	0.88					0.91	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	2787					5136	1599	1787	3574	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1681	1681	2787					5136	1599	216	3574	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	524	0	493	0	0	0	0	1097	318	497	1461	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	220	0	0	0
Lane Group Flow (vph)	262	262	493	0	0	0	0	1097	98	497	1461	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Prot						Perm	D.P+P		
Protected Phases		2 3	2 3					1 6		4 5	1 4 5 6	
Permitted Phases	2 3								1 6	1 6		
Actuated Green, G (s)	24.0	24.0	24.0					35.0	35.0	82.0	86.0	
Effective Green, g (s)	25.0	25.0	25.0					37.0	37.0	86.0	86.0	
Actuated g/C Ratio	0.21	0.21	0.21					0.31	0.31	0.72	0.72	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	350	350	581					1584	493	796	2561	
v/s Ratio Prot			c0.18					c0.21		c0.25	0.41	
v/s Ratio Perm	0.16	0.16							0.06	0.19		
v/c Ratio	0.75	0.75	0.85					0.69	0.20	0.62	0.57	
Uniform Delay, d1	44.6	44.6	45.7					36.5	30.6	20.1	8.1	
Progression Factor	1.00	1.00	1.00					0.63	0.36	0.13	0.42	
Incremental Delay, d2	8.5	8.5	11.1					0.6	0.1	0.8	0.2	
Delay (s)	53.0	53.0	56.8					23.5	11.0	3.3	3.6	
Level of Service	D	D	E					C	B	A	A	
Approach Delay (s)		54.9			0.0			20.7			3.5	
Approach LOS		D			A			C			A	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

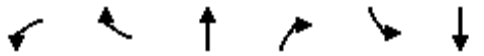
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	298	132	38	55	91	150	36	863	62	499	976	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
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	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1818			1847	1599	1787	3538		1752	3391	
Flt Permitted	0.57	1.00			0.80	1.00	0.14	1.00		0.10	1.00	
Satd. Flow (perm)	1078	1818			1511	1599	272	3538		176	3391	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	343	152	44	63	105	172	41	992	71	574	1122	311
RTOR Reduction (vph)	0	9	0	0	0	118	0	4	0	0	20	0
Lane Group Flow (vph)	343	187	0	0	168	54	41	1059	0	574	1413	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Turn Type	Perm			Perm		Perm	pm+pt			pm+pt		
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	36.1	36.1			36.1	36.1	40.9	36.9		72.9	63.9	
Effective Green, g (s)	37.6	37.6			37.6	37.6	42.9	38.4		73.9	65.4	
Actuated g/C Ratio	0.31	0.31			0.31	0.31	0.36	0.32		0.62	0.55	
Clearance Time (s)	5.5	5.5			5.5	5.5	5.0	5.5		5.0	5.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	338	570			473	501	160	1132		529	1848	
v/s Ratio Prot		0.10					0.01	0.30		c0.29	0.42	
v/s Ratio Perm	c0.32				0.11	0.03	0.08			c0.38		
v/c Ratio	1.01	0.33			0.36	0.11	0.26	0.94		1.09	0.76	
Uniform Delay, d1	41.2	31.5			31.8	29.3	25.7	39.6		36.5	21.3	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.21	0.31	
Incremental Delay, d2	52.8	0.3			0.5	0.1	0.9	15.1		59.9	2.4	
Delay (s)	94.0	31.9			32.3	29.4	26.5	54.7		104.0	9.1	
Level of Service	F	C			C	C	C	D		F	A	
Approach Delay (s)		71.4			30.8			53.7			36.2	
Approach LOS		E			C			D			D	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

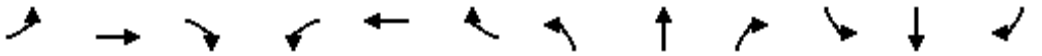
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	684	125	1320	573	86	1234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.98		0.95		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3420		3412		1787	3574
Flt Permitted	0.96		1.00		0.06	1.00
Satd. Flow (perm)	3420		3412		112	3574
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	824	151	1590	690	104	1487
RTOR Reduction (vph)	13	0	41	0	0	0
Lane Group Flow (vph)	962	0	2239	0	104	1487
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type					pm+pt	
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	34.6		62.6		72.4	72.4
Effective Green, g (s)	37.1		65.1		72.9	74.9
Actuated g/C Ratio	0.31		0.54		0.61	0.62
Clearance Time (s)	6.5		6.5		4.5	6.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1057		1851		149	2231
v/s Ratio Prot	c0.28		c0.66		0.03	c0.42
v/s Ratio Perm					0.39	
v/c Ratio	0.91		1.21		0.70	0.67
Uniform Delay, d1	39.8		27.5		27.4	14.5
Progression Factor	1.00		0.54		1.00	1.00
Incremental Delay, d2	11.5		98.0		13.3	1.6
Delay (s)	51.3		113.0		40.7	16.1
Level of Service	D		F		D	B
Approach Delay (s)	51.3		113.0			17.7
Approach LOS	D		F			B

Intersection Summary			
HCM Average Control Delay	69.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

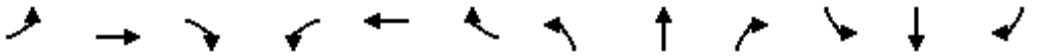
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	240	0	450	362	1571	0	0	1371	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			2.0	2.0
Lane Util. Factor				0.95	0.95	0.88	1.00	0.95			0.91	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1698	1698	2814	1787	3574			5085	1583
Flt Permitted				0.95	0.95	1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)				1698	1698	2814	188	3574			5085	1583
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	270	0	506	407	1765	0	0	1540	458
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	298
Lane Group Flow (vph)	0	0	0	135	135	506	407	1765	0	0	1540	160
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type				Perm		Prot	D.P+P					Perm
Protected Phases					5 6	5 6	1 2	1 2 3 4			3 4	
Permitted Phases				5 6			3 4					3 4
Actuated Green, G (s)				26.0	26.0	26.0	77.0	82.0			40.0	40.0
Effective Green, g (s)				27.0	27.0	27.0	79.0	79.0			42.0	42.0
Actuated g/C Ratio				0.22	0.22	0.22	0.66	0.66			0.35	0.35
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)				382	382	633	643	2353			1780	554
v/s Ratio Prot						c0.18	0.21	c0.49			c0.30	
v/s Ratio Perm				0.08	0.08		0.21					0.10
v/c Ratio				0.35	0.35	0.80	0.63	0.75			0.87	0.29
Uniform Delay, d1				39.2	39.2	43.9	25.3	13.8			36.4	28.2
Progression Factor				1.00	1.00	1.00	0.09	0.28			1.00	2.71
Incremental Delay, d2				0.6	0.6	7.0	1.0	0.5			3.6	0.2
Delay (s)				39.7	39.7	50.9	3.3	4.3			40.1	76.8
Level of Service				D	D	D	A	A			D	E
Approach Delay (s)		0.0			47.0			4.1			48.5	
Approach LOS		A			D			A			D	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

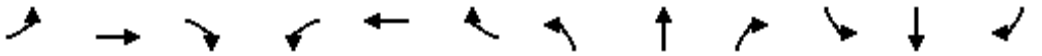
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	804	0	224	0	0	0	0	1254	311	579	993	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	0.88					0.91	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1698	1698	2814					5136	1599	1787	3574	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1698	1698	2814					5136	1599	203	3574	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	855	0	238	0	0	0	0	1334	331	616	1056	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	229	0	0	0
Lane Group Flow (vph)	427	428	238	0	0	0	0	1334	102	616	1056	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Prot						Perm	D.P+P		
Protected Phases		2 3	2 3					1 6		4 5	1 4 5 6	
Permitted Phases	2 3								1 6	1 6		
Actuated Green, G (s)	29.0	29.0	29.0					35.0	35.0	76.0	81.0	
Effective Green, g (s)	30.0	30.0	30.0					37.0	37.0	80.0	80.0	
Actuated g/C Ratio	0.25	0.25	0.25					0.31	0.31	0.67	0.67	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	425	425	704					1584	493	703	2383	
v/s Ratio Prot			0.08					0.26		c0.31	0.30	
v/s Ratio Perm	0.25	0.25							0.06	c0.27		
v/c Ratio	1.00	1.01	0.34					0.84	0.21	0.88	0.44	
Uniform Delay, d1	45.0	45.0	36.9					38.8	30.7	29.3	9.5	
Progression Factor	1.00	1.00	1.00					0.75	0.49	0.23	0.13	
Incremental Delay, d2	44.8	45.4	0.3					2.9	0.1	7.1	0.1	
Delay (s)	89.8	90.4	37.2					31.8	15.1	13.9	1.4	
Level of Service	F	F	D					C	B	B	A	
Approach Delay (s)		78.6			0.0			28.5			6.0	
Approach LOS		E			A			C			A	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.4%	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												
Volume (vph)	342	37	73	28	25	153	78	1037	59	227	916	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1661			1815	1583	1736	3443		1687	3304	
Flt Permitted	0.72	1.00			0.84	1.00	0.17	1.00		0.08	1.00	
Satd. Flow (perm)	1328	1661			1567	1583	315	3443		149	3304	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	372	40	79	30	27	166	85	1127	64	247	996	160
RTOR Reduction (vph)	0	53	0	0	0	112	0	3	0	0	10	0
Lane Group Flow (vph)	372	66	0	0	57	54	85	1188	0	247	1146	0
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	7%	7%	7%
Turn Type	Perm			Perm		Perm	pm+pt			pm+pt		
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	37.3	37.3			37.3	37.3	56.7	50.9		71.7	60.9	
Effective Green, g (s)	38.8	38.8			38.8	38.8	58.7	52.4		72.7	62.4	
Actuated g/C Ratio	0.32	0.32			0.32	0.32	0.49	0.44		0.61	0.52	
Clearance Time (s)	5.5	5.5			5.5	5.5	5.0	5.5		5.0	5.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	429	537			507	512	235	1503		306	1718	
v/s Ratio Prot		0.04					0.02	0.34		c0.11	0.35	
v/s Ratio Perm	c0.28				0.04	0.03	0.16			c0.38		
v/c Ratio	0.87	0.12			0.11	0.10	0.36	0.79		0.81	0.67	
Uniform Delay, d1	38.2	28.6			28.5	28.4	17.7	29.1		31.8	21.2	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.81	0.36	
Incremental Delay, d2	16.6	0.1			0.1	0.1	1.0	4.3		13.6	2.0	
Delay (s)	54.8	28.7			28.6	28.5	18.6	33.4		71.0	9.6	
Level of Service	D	C			C	C	B	C		E	A	
Approach Delay (s)		48.5			28.5			32.4			20.4	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

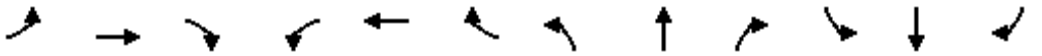
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	909	78	1118	980	129	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.99		0.93		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3448		3324		1787	3574
Flt Permitted	0.96		1.00		0.06	1.00
Satd. Flow (perm)	3448		3324		112	3574
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	937	80	1153	1010	133	963
RTOR Reduction (vph)	6	0	132	0	0	0
Lane Group Flow (vph)	1012	0	2031	0	133	963
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type					pm+pt	
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	35.0		62.5		72.0	72.0
Effective Green, g (s)	37.5		65.0		72.5	74.5
Actuated g/C Ratio	0.31		0.54		0.60	0.62
Clearance Time (s)	6.5		6.5		4.5	6.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1078		1801		144	2219
v/s Ratio Prot	c0.29		c0.61		c0.04	0.27
v/s Ratio Perm					0.51	
v/c Ratio	0.94		1.13		0.92	0.43
Uniform Delay, d1	40.1		27.5		32.4	11.8
Progression Factor	1.00		0.55		1.00	1.00
Incremental Delay, d2	14.7		63.0		52.3	0.6
Delay (s)	54.9		78.2		84.7	12.4
Level of Service	D		E		F	B
Approach Delay (s)	54.9		78.2			21.2
Approach LOS	D		E			C

Intersection Summary			
HCM Average Control Delay	58.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.9%	ICU Level of Service	G
Analysis Period (min)	15		

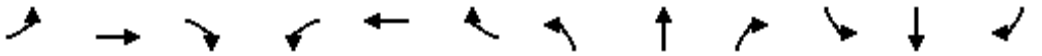
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	346	0	615	165	1248	0	0	1320	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1681	1681	1583	1787	3574			3539	1583
Flt Permitted				0.95	0.95	1.00	0.11	1.00			1.00	1.00
Satd. Flow (perm)				1681	1681	1583	198	3574			3539	1583
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	0	0	417	0	741	199	1504	0	0	1590	578
RTOR Reduction (vph)	0	0	0	0	0	36	0	0	0	0	0	376
Lane Group Flow (vph)	0	0	0	208	209	705	199	1504	0	0	1590	202
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Turn Type				Perm		Perm	D.P+P					Perm
Protected Phases					2 3		4 5	1 4 5 6			1 6	
Permitted Phases				2 3		2 3	1 6					1 6
Actuated Green, G (s)				30.0	30.0	30.0	68.0	73.0			36.0	36.0
Effective Green, g (s)				31.0	31.0	31.0	72.0	72.0			38.0	38.0
Actuated g/C Ratio				0.27	0.27	0.27	0.63	0.63			0.33	0.33
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)				453	453	427	594	2238			1169	523
v/s Ratio Prot							0.10	c0.42			c0.45	
v/s Ratio Perm				0.12	0.12	c0.45	0.11					0.13
v/c Ratio				0.46	0.46	1.65	0.34	0.67			1.36	0.39
Uniform Delay, d1				35.0	35.0	42.0	14.7	13.9			38.5	29.5
Progression Factor				1.00	1.00	1.00	0.09	0.22			0.90	0.91
Incremental Delay, d2				0.7	0.7	303.5	0.2	0.5			165.7	0.3
Delay (s)				35.8	35.8	345.5	1.5	3.6			200.3	27.3
Level of Service				D	D	F	A	A			F	C
Approach Delay (s)		0.0			234.0			3.3			154.2	
Approach LOS		A			F			A			F	

Intersection Summary			
HCM Average Control Delay	121.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

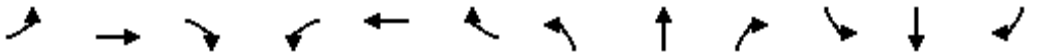
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	461	0	434	0	0	0	0	965	280	437	1286	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1681	1681	1583					3574	1599	1787	3574	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1681	1681	1583					3574	1599	198	3574	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	524	0	493	0	0	0	0	1097	318	497	1461	0
RTOR Reduction (vph)	0	0	56	0	0	0	0	0	210	0	0	0
Lane Group Flow (vph)	262	262	437	0	0	0	0	1097	108	497	1461	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Perm						Perm	D.P+P		
Protected Phases		5 6						3 4		1 2	1 2	
Permitted Phases	5 6		5 6						3 4	3 4	3 4	
Actuated Green, G (s)	23.0	23.0	23.0					36.0	36.0	75.0	75.0	
Effective Green, g (s)	24.0	24.0	24.0					38.0	38.0	79.0	79.0	
Actuated g/C Ratio	0.21	0.21	0.21					0.33	0.33	0.69	0.69	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	351	351	330					1181	528	703	2455	
v/s Ratio Prot								c0.31		c0.25	0.21	
v/s Ratio Perm	0.16	0.16	c0.28						0.07	0.23	0.20	
v/c Ratio	0.75	0.75	1.32					0.93	0.20	0.71	0.60	
Uniform Delay, d1	42.6	42.6	45.5					37.2	27.6	24.5	9.5	
Progression Factor	1.00	1.00	1.00					0.58	0.22	0.15	0.43	
Incremental Delay, d2	8.4	8.4	165.3					5.9	0.1	0.3	0.0	
Delay (s)	51.0	51.0	210.8					27.3	6.2	4.1	4.1	
Level of Service	D	D	F					C	A	A	A	
Approach Delay (s)		128.5			0.0			22.5			4.1	
Approach LOS		F			A			C			A	

Intersection Summary			
HCM Average Control Delay	38.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.2%	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												
Volume (vph)	298	132	38	55	91	150	36	863	62	499	976	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
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	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00			0.98	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1818			1847	1599	1787	3538		1752	3391	
Flt Permitted	0.58	1.00			0.81	1.00	0.16	1.00		0.10	1.00	
Satd. Flow (perm)	1084	1818			1525	1599	293	3538		192	3391	
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	343	152	44	63	105	172	41	992	71	574	1122	311
RTOR Reduction (vph)	0	9	0	0	0	118	0	5	0	0	21	0
Lane Group Flow (vph)	343	187	0	0	168	54	41	1058	0	574	1412	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Turn Type	Perm			Perm		Perm	pm+pt			pm+pt		
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	34.5	34.5			34.5	34.5	36.5	33.5		69.5	61.5	
Effective Green, g (s)	36.0	36.0			36.0	36.0	38.5	35.0		70.5	63.0	
Actuated g/C Ratio	0.31	0.31			0.31	0.31	0.33	0.30		0.61	0.55	
Clearance Time (s)	5.5	5.5			5.5	5.5	5.0	5.5		5.0	5.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	339	569			477	501	150	1077		552	1858	
v/s Ratio Prot		0.10					0.01	0.30		c0.29	0.42	
v/s Ratio Perm	c0.32				0.11	0.03	0.08			c0.35		
v/c Ratio	1.01	0.33			0.35	0.11	0.27	0.98		1.04	0.76	
Uniform Delay, d1	39.5	30.2			30.5	28.1	26.2	39.7		34.2	20.1	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.40	0.41	
Incremental Delay, d2	51.9	0.3			0.5	0.1	1.0	23.5		42.4	2.0	
Delay (s)	91.4	30.6			30.9	28.2	27.2	63.2		90.4	10.3	
Level of Service	F	C			C	C	C	E		F	B	
Approach Delay (s)		69.3			29.5			61.9			33.2	
Approach LOS		E			C			E			C	

Intersection Summary			
HCM Average Control Delay	45.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

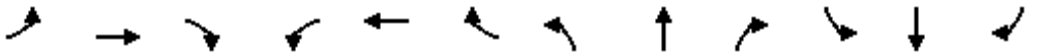
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	684	125	1320	573	86	1234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.98		0.95		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3420		3412		1787	3574
Flt Permitted	0.96		1.00		0.07	1.00
Satd. Flow (perm)	3420		3412		124	3574
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	824	151	1590	690	104	1487
RTOR Reduction (vph)	14	0	42	0	0	0
Lane Group Flow (vph)	961	0	2238	0	104	1487
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type					pm+pt	
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	34.2		56.1		67.8	67.8
Effective Green, g (s)	36.7		58.6		68.3	70.3
Actuated g/C Ratio	0.32		0.51		0.59	0.61
Clearance Time (s)	6.5		6.5		4.5	6.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1091		1739		185	2185
v/s Ratio Prot	c0.28		c0.66		0.04	c0.42
v/s Ratio Perm					0.30	
v/c Ratio	0.88		1.29		0.56	0.68
Uniform Delay, d1	37.1		28.2		24.8	14.9
Progression Factor	1.00		0.58		1.00	1.00
Incremental Delay, d2	8.5		130.8		3.9	1.7
Delay (s)	45.6		147.1		28.7	16.6
Level of Service	D		F		C	B
Approach Delay (s)	45.6		147.1			17.4
Approach LOS	D		F			B

Intersection Summary			
HCM Average Control Delay	84.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

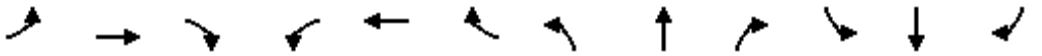
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	240	0	450	362	1571	0	0	1371	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor				0.95	0.95	1.00	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1698	1698	1599	1787	3574			3539	1583
Flt Permitted				0.95	0.95	1.00	0.10	1.00			1.00	1.00
Satd. Flow (perm)				1698	1698	1599	188	3574			3539	1583
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	270	0	506	407	1765	0	0	1540	458
RTOR Reduction (vph)	0	0	0	0	0	24	0	0	0	0	0	295
Lane Group Flow (vph)	0	0	0	135	135	482	407	1765	0	0	1540	163
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type				Perm		Perm	D.P+P					Perm
Protected Phases					2 3		4 5	1 4 5 6			1 6	
Permitted Phases				2 3		2 3	1 6					1 6
Actuated Green, G (s)				29.0	29.0	29.0	74.0	79.0			38.0	38.0
Effective Green, g (s)				30.0	30.0	30.0	78.0	78.0			40.0	40.0
Actuated g/C Ratio				0.25	0.25	0.25	0.65	0.65			0.33	0.33
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)				425	425	400	629	2323			1180	528
v/s Ratio Prot							0.21	c0.49			c0.44	
v/s Ratio Perm				0.08	0.08	c0.30	0.22					0.10
v/c Ratio				0.32	0.32	1.21	0.65	0.76			1.31	0.31
Uniform Delay, d1				36.7	36.7	45.0	26.2	14.5			40.0	29.7
Progression Factor				1.00	1.00	1.00	0.08	0.17			1.01	2.39
Incremental Delay, d2				0.4	0.4	113.7	0.2	0.1			142.1	0.3
Delay (s)				37.1	37.1	158.7	2.2	2.6			182.3	71.3
Level of Service				D	D	F	A	A			F	E
Approach Delay (s)		0.0			116.4			2.5			156.9	
Approach LOS		A			F			A			F	

Intersection Summary			
HCM Average Control Delay	82.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

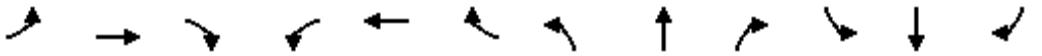
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	804	0	224	0	0	0	0	1254	311	579	993	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor	0.95	0.95	1.00					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1698	1698	1599					3574	1599	1787	3574	
Flt Permitted	0.95	0.95	1.00					1.00	1.00	0.11	1.00	
Satd. Flow (perm)	1698	1698	1599					3574	1599	198	3574	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	855	0	238	0	0	0	0	1334	331	616	1056	0
RTOR Reduction (vph)	0	0	112	0	0	0	0	0	173	0	0	0
Lane Group Flow (vph)	427	428	126	0	0	0	0	1334	158	616	1056	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Perm		Perm						Perm	D.P+P		
Protected Phases		5 6						3 4		1 2	1 2	
Permitted Phases	5 6		5 6						3 4	3 4	3 4	
Actuated Green, G (s)	27.0	27.0	27.0					36.0	36.0	76.0	76.0	
Effective Green, g (s)	28.0	28.0	28.0					38.0	38.0	80.0	80.0	
Actuated g/C Ratio	0.23	0.23	0.23					0.32	0.32	0.67	0.67	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	396	396	373					1132	506	688	2383	
v/s Ratio Prot								c0.37		c0.31	0.16	
v/s Ratio Perm	0.25	0.25	0.08						0.10	0.28	0.14	
v/c Ratio	1.08	1.08	0.34					1.18	0.31	0.90	0.44	
Uniform Delay, d1	46.0	46.0	38.3					41.0	31.1	30.6	9.5	
Progression Factor	1.00	1.00	1.00					0.73	0.31	0.22	0.17	
Incremental Delay, d2	67.8	68.6	0.5					86.8	0.2	1.6	0.0	
Delay (s)	113.8	114.6	38.8					116.9	9.8	8.3	1.6	
Level of Service	F	F	D					F	A	A	A	
Approach Delay (s)		97.8			0.0			95.6			4.1	
Approach LOS		F			A			F			A	

Intersection Summary			
HCM Average Control Delay	61.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	342	37	73	28	25	153	78	1037	59	227	916	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.90			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1752	1661			1815	1583	1736	3443		1687	3304	
Flt Permitted	0.72	1.00			0.84	1.00	0.17	1.00		0.08	1.00	
Satd. Flow (perm)	1328	1661			1567	1583	315	3443		149	3304	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	372	40	79	30	27	166	85	1127	64	247	996	160
RTOR Reduction (vph)	0	53	0	0	0	112	0	3	0	0	10	0
Lane Group Flow (vph)	372	66	0	0	57	54	85	1188	0	247	1146	0
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	4%	4%	4%	7%	7%	7%
Turn Type	Perm			Perm		Perm	pm+pt			pm+pt		
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)	37.3	37.3			37.3	37.3	56.7	50.9		71.7	60.9	
Effective Green, g (s)	38.8	38.8			38.8	38.8	58.7	52.4		72.7	62.4	
Actuated g/C Ratio	0.32	0.32			0.32	0.32	0.49	0.44		0.61	0.52	
Clearance Time (s)	5.5	5.5			5.5	5.5	5.0	5.5		5.0	5.5	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	429	537			507	512	235	1503		306	1718	
v/s Ratio Prot		0.04					0.02	0.34		c0.11	0.35	
v/s Ratio Perm	c0.28				0.04	0.03	0.16			c0.38		
v/c Ratio	0.87	0.12			0.11	0.10	0.36	0.79		0.81	0.67	
Uniform Delay, d1	38.2	28.6			28.5	28.4	17.7	29.1		31.8	21.2	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00		1.85	0.36	
Incremental Delay, d2	16.6	0.1			0.1	0.1	1.0	4.3		13.5	1.9	
Delay (s)	54.8	28.7			28.6	28.5	18.6	33.4		72.2	9.6	
Level of Service	D	C			C	C	B	C		E	A	
Approach Delay (s)		48.5			28.5			32.4			20.6	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

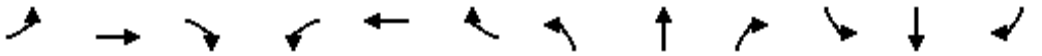
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	909	78	1118	980	129	934
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0	4.0
Lane Util. Factor	0.97		0.95		1.00	0.95
Frt	0.99		0.93		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	3448		3324		1787	3574
Flt Permitted	0.96		1.00		0.06	1.00
Satd. Flow (perm)	3448		3324		115	3574
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	937	80	1153	1010	133	963
RTOR Reduction (vph)	6	0	132	0	0	0
Lane Group Flow (vph)	1012	0	2031	0	133	963
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type					pm+pt	
Protected Phases	4		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	35.0		61.0		72.0	72.0
Effective Green, g (s)	37.5		63.5		72.5	74.5
Actuated g/C Ratio	0.31		0.53		0.60	0.62
Clearance Time (s)	6.5		6.5		4.5	6.5
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	1078		1759		167	2219
v/s Ratio Prot	c0.29		c0.61		c0.05	0.27
v/s Ratio Perm					0.44	
v/c Ratio	0.94		1.15		0.80	0.43
Uniform Delay, d1	40.1		28.2		30.9	11.8
Progression Factor	1.00		0.43		1.00	1.00
Incremental Delay, d2	14.7		73.5		22.5	0.6
Delay (s)	54.9		85.5		53.5	12.4
Level of Service	D		F		D	B
Approach Delay (s)	54.9		85.5			17.4
Approach LOS	D		F			B

Intersection Summary			
HCM Average Control Delay	60.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.9%	ICU Level of Service	G
Analysis Period (min)	15		

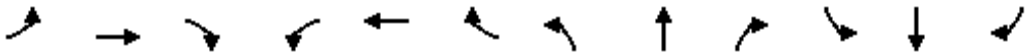
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	333	250	184	288	0	0	0	0	349	0	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3539	1583	1656	3312					1665	1665	1568
Flt Permitted		1.00	1.00	0.40	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3539	1583	702	3312					1665	1665	1568
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	387	291	214	335	0	0	0	0	406	0	474
RTOR Reduction (vph)	0	0	226	0	0	0	0	0	0	0	0	356
Lane Group Flow (vph)	0	387	65	214	335	0	0	0	0	203	203	119
Heavy Vehicles (%)	2%	2%	2%	9%	9%	9%	1%	1%	1%	3%	3%	3%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		16.0	16.0	44.0	50.0					18.0	18.0	18.0
Effective Green, g (s)		18.0	18.0	46.0	46.0					20.0	20.0	20.0
Actuated g/C Ratio		0.22	0.22	0.57	0.57					0.25	0.25	0.25
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)		796	356	749	1904					416	416	392
v/s Ratio Prot		c0.11		c0.10	0.10							
v/s Ratio Perm			0.04	0.06						c0.12	0.12	0.08
v/c Ratio		0.49	0.18	0.29	0.18					0.49	0.49	0.30
Uniform Delay, d1		27.0	25.1	8.4	8.0					25.6	25.6	24.3
Progression Factor		1.00	1.00	1.24	0.11					1.00	1.00	1.00
Incremental Delay, d2		0.5	0.3	0.2	0.0					4.1	4.1	2.0
Delay (s)		27.4	25.3	10.7	0.9					29.7	29.7	26.3
Level of Service		C	C	B	A					C	C	C
Approach Delay (s)		26.5			4.7			0.0			27.9	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

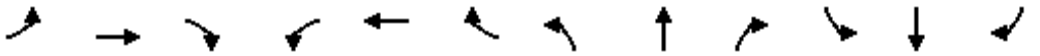
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	509	0	0	207	339	244	0	168	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3252	1455		1556	1392			
Flt Permitted	0.60	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1088	3471			3252	1455		1556	1392			
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	210	613	0	0	249	408	294	0	202	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	265	0	0	154	0	0	0
Lane Group Flow (vph)	210	613	0	0	249	143	0	294	48	0	0	0
Heavy Vehicles (%)	4%	4%	4%	11%	11%	11%	16%	16%	16%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	46.0	51.0			26.0	26.0		17.0	17.0			
Effective Green, g (s)	43.0	50.0			28.0	28.0		19.0	19.0			
Actuated g/C Ratio	0.54	0.62			0.35	0.35		0.24	0.24			
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)	714	2169			1138	509		370	331			
v/s Ratio Prot	0.06	c0.18			0.08							
v/s Ratio Perm	c0.10					0.10		0.19	0.03			
v/c Ratio	0.29	0.28			0.22	0.28		0.79	0.14			
Uniform Delay, d1	9.7	6.8			18.3	18.7		28.7	24.1			
Progression Factor	0.18	0.04			1.17	3.97		1.00	1.00			
Incremental Delay, d2	0.2	0.1			0.4	1.2		16.0	0.9			
Delay (s)	1.9	0.3			21.9	75.6		44.7	25.0			
Level of Service	A	A			C	E		D	C			
Approach Delay (s)		0.7			55.3			36.7			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

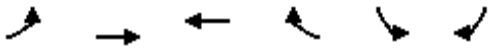
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	277	218	257	38	125	42	269	153	26	16	139	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1703	3406	1524	1612	3102		1770	3463		1612	2941	
Flt Permitted	0.53	1.00	1.00	0.60	1.00		0.27	1.00		0.63	1.00	
Satd. Flow (perm)	944	3406	1524	1017	3102		509	3463		1061	2941	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	311	245	289	43	140	47	302	172	29	18	156	218
RTOR Reduction (vph)	0	0	175	0	34	0	0	16	0	0	176	0
Lane Group Flow (vph)	311	245	114	43	153	0	302	185	0	18	198	0
Heavy Vehicles (%)	6%	6%	6%	12%	12%	12%	2%	2%	2%	12%	12%	12%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	36.5	29.5	29.5	24.6	20.6		31.5	27.3		14.6	13.4	
Effective Green, g (s)	35.5	31.5	31.5	22.6	22.6		30.5	29.3		12.6	15.4	
Actuated g/C Ratio	0.44	0.39	0.39	0.28	0.28		0.38	0.37		0.16	0.19	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	532	1341	600	310	876		416	1268		168	566	
v/s Ratio Prot	c0.09	0.07		0.01	0.05		c0.13	0.05		0.00	0.07	
v/s Ratio Perm	c0.17		0.07	0.03			c0.15			0.02		
v/c Ratio	0.58	0.18	0.19	0.14	0.17		0.73	0.15		0.11	0.35	
Uniform Delay, d1	15.3	15.8	15.9	21.2	21.7		19.0	17.0		28.8	28.0	
Progression Factor	0.49	0.52	0.68	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.3	0.7	0.2	0.4		6.2	0.1		0.3	0.4	
Delay (s)	9.1	8.6	11.4	21.4	22.1		25.2	17.0		29.1	28.3	
Level of Service	A	A	B	C	C		C	B		C	C	
Approach Delay (s)		9.7			22.0			22.0			28.4	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

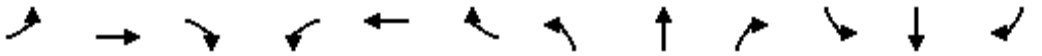
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	5	523	682	16	44	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	581	758	18	49	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	776				1068	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	776				1068	388
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				77	98
cM capacity (veh/h)	823				217	614

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	199	387	505	270	61
Volume Left	6	0	0	0	49
Volume Right	0	0	0	18	12
cSH	823	1700	1700	1700	249
Volume to Capacity	0.01	0.23	0.30	0.16	0.25
Queue Length 95th (ft)	1	0	0	0	23
Control Delay (s)	0.3	0.0	0.0	0.0	24.1
Lane LOS	A				C
Approach Delay (s)	0.1		0.0		24.1
Approach LOS					C

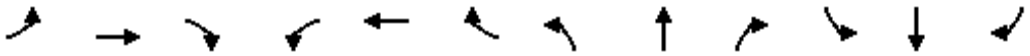
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	376	338	207	340	0	0	0	0	407	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3539	1583	1656	3312					1665	1665	1568
Flt Permitted		1.00	1.00	0.36	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3539	1583	622	3312					1665	1665	1568
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	437	393	241	395	0	0	0	0	473	0	640
RTOR Reduction (vph)	0	0	297	0	0	0	0	0	0	0	0	353
Lane Group Flow (vph)	0	437	96	241	395	0	0	0	0	236	237	287
Heavy Vehicles (%)	2%	2%	2%	9%	9%	9%	1%	1%	1%	3%	3%	3%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		20.0	20.0	49.0	55.0					23.0	23.0	23.0
Effective Green, g (s)		22.0	22.0	51.0	51.0					25.0	25.0	25.0
Actuated g/C Ratio		0.24	0.24	0.57	0.57					0.28	0.28	0.28
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)		865	387	697	1877					463	463	436
v/s Ratio Prot		c0.12		c0.12	0.12							
v/s Ratio Perm			0.06	0.08						0.14	0.14	c0.18
v/c Ratio		0.51	0.25	0.35	0.21					0.51	0.51	0.66
Uniform Delay, d1		29.3	27.3	10.2	9.6					27.3	27.4	28.7
Progression Factor		1.00	1.00	1.68	0.28					1.00	1.00	1.00
Incremental Delay, d2		0.5	0.3	0.3	0.0					4.0	4.0	7.6
Delay (s)		29.8	27.7	17.4	2.8					31.3	31.4	36.3
Level of Service		C	C	B	A					C	C	D
Approach Delay (s)		28.8			8.3			0.0			34.2	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	26.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		

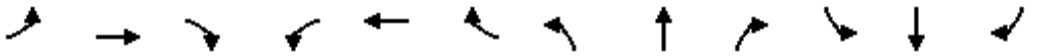
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	196	622	0	0	257	382	255	0	171	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3252	1455		1556	1392			
Flt Permitted	0.54	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	988	3471			3252	1455		1556	1392			
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	236	749	0	0	310	460	307	0	206	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	276	0	0	153	0	0	0
Lane Group Flow (vph)	236	749	0	0	310	184	0	307	53	0	0	0
Heavy Vehicles (%)	4%	4%	4%	11%	11%	11%	16%	16%	16%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	52.0	57.0			34.0	34.0		21.0	21.0			
Effective Green, g (s)	49.0	56.0			36.0	36.0		23.0	23.0			
Actuated g/C Ratio	0.54	0.62			0.40	0.40		0.26	0.26			
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)	654	2160			1301	582		398	356			
v/s Ratio Prot	0.06	c0.22			0.10							
v/s Ratio Perm	c0.14					0.13		0.20	0.04			
v/c Ratio	0.36	0.35			0.24	0.32		0.77	0.15			
Uniform Delay, d1	10.8	8.2			17.9	18.5		31.1	25.9			
Progression Factor	0.77	0.19			1.35	5.18		1.00	1.00			
Incremental Delay, d2	0.3	0.1			0.3	1.1		13.5	0.9			
Delay (s)	8.6	1.6			24.5	97.2		44.6	26.8			
Level of Service	A	A			C	F		D	C			
Approach Delay (s)		3.3			67.9			37.4			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		

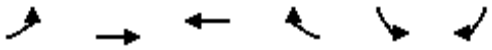
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	313	220	342	174	141	49	292	318	45	18	348	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1703	3406	1524	1612	3098		1770	3473		1612	3037	
Flt Permitted	0.50	1.00	1.00	0.60	1.00		0.18	1.00		0.51	1.00	
Satd. Flow (perm)	897	3406	1524	1015	3098		330	3473		869	3037	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	352	247	384	196	158	55	328	357	51	20	391	246
RTOR Reduction (vph)	0	0	258	0	38	0	0	12	0	0	108	0
Lane Group Flow (vph)	352	247	126	196	176	0	328	396	0	20	529	0
Heavy Vehicles (%)	6%	6%	6%	12%	12%	12%	2%	2%	2%	12%	12%	12%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	38.9	27.5	27.5	28.9	20.5		39.1	33.7		22.0	19.6	
Effective Green, g (s)	37.9	29.5	29.5	26.9	22.5		38.1	35.7		20.0	21.6	
Actuated g/C Ratio	0.42	0.33	0.33	0.30	0.25		0.42	0.40		0.22	0.24	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	507	1116	500	352	775		388	1378		205	729	
v/s Ratio Prot	c0.11	0.07		0.05	0.06		c0.15	0.11		0.00	0.17	
v/s Ratio Perm	c0.18		0.08	0.12			c0.21			0.02		
v/c Ratio	0.69	0.22	0.25	0.56	0.23		0.85	0.29		0.10	0.73	
Uniform Delay, d1	19.2	21.9	22.2	25.2	26.8		20.3	18.5		27.6	31.5	
Progression Factor	0.42	0.47	1.12	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.9	0.4	1.2	1.9	0.7		15.4	0.1		0.2	3.6	
Delay (s)	11.9	10.7	26.1	27.1	27.5		35.8	18.6		27.8	35.1	
Level of Service	B	B	C	C	C		D	B		C	D	
Approach Delay (s)		17.2			27.3			26.3			34.9	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

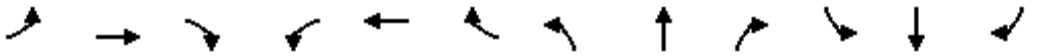
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	8	690	869	20	50	19
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	9	767	966	22	56	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	988				1378	494
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	988				1378	494
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				59	96
cM capacity (veh/h)	683				135	524

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	264	511	644	344	77
Volume Left	9	0	0	0	56
Volume Right	0	0	0	22	21
cSH	683	1700	1700	1700	170
Volume to Capacity	0.01	0.30	0.38	0.20	0.45
Queue Length 95th (ft)	1	0	0	0	52
Control Delay (s)	0.5	0.0	0.0	0.0	42.5
Lane LOS	A				E
Approach Delay (s)	0.2		0.0		42.5
Approach LOS					E

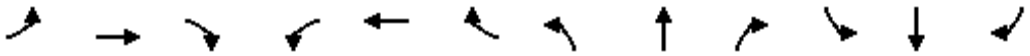
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	376	338	207	340	0	0	0	0	407	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3539	1583	1656	3312					1665	1665	1568
Flt Permitted		1.00	1.00	0.38	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3539	1583	667	3312					1665	1665	1568
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	437	393	241	395	0	0	0	0	473	0	640
RTOR Reduction (vph)	0	0	290	0	0	0	0	0	0	0	0	339
Lane Group Flow (vph)	0	437	103	241	395	0	0	0	0	236	237	301
Heavy Vehicles (%)	2%	2%	2%	9%	9%	9%	1%	1%	1%	3%	3%	3%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		19.0	19.0	41.0	47.0					21.0	21.0	21.0
Effective Green, g (s)		21.0	21.0	43.0	43.0					23.0	23.0	23.0
Actuated g/C Ratio		0.26	0.26	0.54	0.54					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)		929	416	643	1780					479	479	451
v/s Ratio Prot		c0.12		c0.11	0.12							
v/s Ratio Perm			0.07	0.09						0.14	0.14	c0.19
v/c Ratio		0.47	0.25	0.37	0.22					0.49	0.49	0.67
Uniform Delay, d1		24.8	23.3	10.2	9.7					23.7	23.7	25.1
Progression Factor		1.00	1.00	1.23	0.17					1.00	1.00	1.00
Incremental Delay, d2		1.7	1.4	0.4	0.0					3.6	3.6	7.6
Delay (s)		26.5	24.7	12.9	1.7					27.3	27.3	32.7
Level of Service		C	C	B	A					C	C	C
Approach Delay (s)		25.7			5.9			0.0			30.4	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

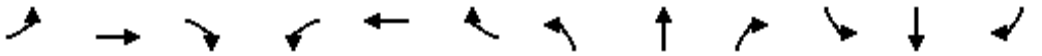
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	196	622	0	0	257	382	255	0	171	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	2.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3252	1455		1556	1392			
Flt Permitted	0.52	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	950	3471			3252	1455		1556	1392			
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	236	749	0	0	310	460	307	0	206	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	155	0	0	0
Lane Group Flow (vph)	236	749	0	0	310	460	0	307	52	0	0	0
Heavy Vehicles (%)	4%	4%	4%	11%	11%	11%	16%	16%	16%	1%	1%	1%
Turn Type	D.P+P					Free	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					Free	1		1			
Actuated Green, G (s)	45.0	50.0			21.0	80.0		18.0	18.0			
Effective Green, g (s)	42.0	49.0			23.0	80.0		20.0	20.0			
Actuated g/C Ratio	0.52	0.61			0.29	1.00		0.25	0.25			
Clearance Time (s)					6.0			6.0	6.0			
Vehicle Extension (s)					3.0			3.0	3.0			
Lane Grp Cap (vph)	695	2126			935	1455		389	348			
v/s Ratio Prot	0.08	c0.22			0.10							
v/s Ratio Perm	0.09					c0.32		0.20	0.04			
v/c Ratio	0.34	0.35			0.33	0.32		0.79	0.15			
Uniform Delay, d1	10.5	7.7			22.4	0.0		28.0	23.4			
Progression Factor	0.31	0.07			1.11	1.00		1.00	1.00			
Incremental Delay, d2	0.3	0.1			0.2	0.5		15.0	0.9			
Delay (s)	3.5	0.6			25.1	0.5		43.0	24.3			
Level of Service	A	A			C	A		D	C			
Approach Delay (s)		1.3			10.4			35.5			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

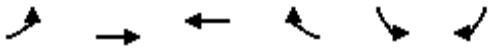
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	313	220	342	174	141	49	292	318	45	18	348	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3303	3406	1524	1612	3098		1770	3473		1612	3223	1442
Flt Permitted	0.59	1.00	1.00	0.60	1.00		0.31	1.00		0.51	1.00	1.00
Satd. Flow (perm)	2051	3406	1524	1015	3098		578	3473		869	3223	1442
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	352	247	384	196	158	55	328	357	51	20	391	246
RTOR Reduction (vph)	0	0	256	0	37	0	0	13	0	0	0	195
Lane Group Flow (vph)	352	247	128	196	176	0	328	395	0	20	391	51
Heavy Vehicles (%)	6%	6%	6%	12%	12%	12%	2%	2%	2%	12%	12%	12%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	33.0	24.7	24.7	30.8	23.6		33.1	27.7		19.0	16.6	16.6
Effective Green, g (s)	31.0	26.7	26.7	28.8	25.6		32.1	29.7		17.0	18.6	16.6
Actuated g/C Ratio	0.39	0.33	0.33	0.36	0.32		0.40	0.37		0.21	0.23	0.21
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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	3.0
Lane Grp Cap (vph)	909	1137	509	412	991		418	1289		198	749	299
v/s Ratio Prot	0.04	0.07		c0.04	0.06		c0.12	0.11		0.00	0.12	
v/s Ratio Perm	0.11		0.08	c0.13			c0.19			0.02		0.04
v/c Ratio	0.39	0.22	0.25	0.48	0.18		0.78	0.31		0.10	0.52	0.17
Uniform Delay, d1	16.8	19.1	19.4	18.7	19.6		18.2	17.8		25.1	26.8	26.0
Progression Factor	0.45	0.53	0.96	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.4	1.1	0.9	0.4		9.3	0.1		0.2	0.7	0.3
Delay (s)	7.8	10.5	19.8	19.5	20.0		27.5	18.0		25.3	27.5	26.3
Level of Service	A	B	B	B	B		C	B		C	C	C
Approach Delay (s)		13.2			19.8			22.2			27.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		

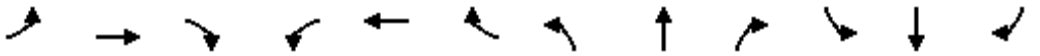
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	8	690	869	20	50	19
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	9	767	966	22	56	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	988				1378	494
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	988				1378	494
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				59	96
cM capacity (veh/h)	683				135	524

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	264	511	644	344	77
Volume Left	9	0	0	0	56
Volume Right	0	0	0	22	21
cSH	683	1700	1700	1700	170
Volume to Capacity	0.01	0.30	0.38	0.20	0.45
Queue Length 95th (ft)	1	0	0	0	52
Control Delay (s)	0.5	0.0	0.0	0.0	42.5
Lane LOS	A				E
Approach Delay (s)	0.2		0.0		42.5
Approach LOS					E

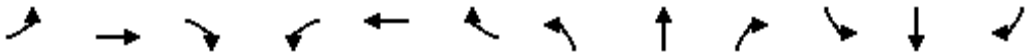
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	330	238	154	269	0	0	0	0	355	0	418
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3539	1583	1656	3312						1752	1568
Flt Permitted		1.00	1.00	0.40	1.00						0.95	1.00
Satd. Flow (perm)		3539	1583	698	3312						1752	1568
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	384	277	179	313	0	0	0	0	413	0	486
RTOR Reduction (vph)	0	0	216	0	0	0	0	0	0	0	0	334
Lane Group Flow (vph)	0	384	61	179	313	0	0	0	0	0	413	152
Heavy Vehicles (%)	2%	2%	2%	9%	9%	9%	1%	1%	1%	3%	3%	3%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		15.5	15.5	39.0	45.0						23.0	23.0
Effective Green, g (s)		17.5	17.5	41.0	41.0						25.0	25.0
Actuated g/C Ratio		0.22	0.22	0.51	0.51						0.31	0.31
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)		774	346	651	1697						548	490
v/s Ratio Prot		c0.11		c0.08	0.09							
v/s Ratio Perm			0.04	0.06							0.24	0.10
v/c Ratio		0.50	0.18	0.27	0.18						0.75	0.31
Uniform Delay, d1		27.4	25.4	14.3	10.5						24.7	20.9
Progression Factor		0.73	1.85	0.75	1.81						1.00	1.00
Incremental Delay, d2		0.5	0.2	0.2	0.0						9.3	1.6
Delay (s)		20.5	47.1	11.0	19.0						34.0	22.6
Level of Service		C	D	B	B						C	C
Approach Delay (s)		31.6			16.1			0.0			27.8	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

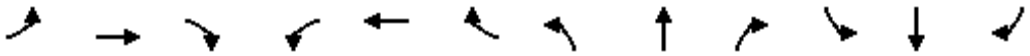
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	177	520	0	0	196	334	210	0	163	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3252	1455		1556	1392			
Flt Permitted	0.59	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1073	3471			3252	1455		1556	1392			
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	213	627	0	0	236	402	253	0	196	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	307	0	0	142	0	0	0
Lane Group Flow (vph)	213	627	0	0	236	95	0	253	54	0	0	0
Heavy Vehicles (%)	4%	4%	4%	11%	11%	11%	16%	16%	16%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	37.0	49.0			17.0	17.0		20.0	20.0			
Effective Green, g (s)	40.0	51.0			19.0	19.0		22.0	22.0			
Actuated g/C Ratio	0.50	0.64			0.24	0.24		0.28	0.28			
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)	719	2213			772	346		428	383			
v/s Ratio Prot	0.08	c0.18			0.07							
v/s Ratio Perm	0.07					0.07		0.16	0.04			
v/c Ratio	0.30	0.28			0.31	0.28		0.59	0.14			
Uniform Delay, d1	11.4	6.4			25.1	24.9		25.1	21.9			
Progression Factor	0.49	0.10			0.83	2.94		1.00	1.00			
Incremental Delay, d2	0.2	0.1			0.9	1.7		5.9	0.8			
Delay (s)	5.8	0.7			21.7	75.0		31.0	22.6			
Level of Service	A	A			C	E		C	C			
Approach Delay (s)		2.0			55.3			27.3			0.0	
Approach LOS		A			E			C			A	

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

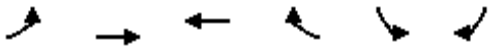
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	272	213	251	79	112	39	265	200	32	16	194	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1703	3406	1524	1612	3098		1770	3466		1612	2997	
Flt Permitted	0.64	1.00	1.00	0.60	1.00		0.25	1.00		0.59	1.00	
Satd. Flow (perm)	1155	3406	1524	1023	3098		464	3466		1002	2997	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	306	239	282	89	126	44	298	225	36	18	218	192
RTOR Reduction (vph)	0	0	175	0	32	0	0	15	0	0	154	0
Lane Group Flow (vph)	306	239	107	89	138	0	298	246	0	18	256	0
Heavy Vehicles (%)	6%	6%	6%	12%	12%	12%	2%	2%	2%	12%	12%	12%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	39.1	28.3	28.3	24.4	19.6		31.9	27.7		15.2	14.0	
Effective Green, g (s)	38.1	30.3	30.3	22.4	21.6		30.9	29.7		13.2	16.0	
Actuated g/C Ratio	0.48	0.38	0.38	0.28	0.27		0.39	0.37		0.16	0.20	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	636	1290	577	314	836		406	1287		167	599	
v/s Ratio Prot	c0.08	0.07		0.01	0.04		c0.13	0.07		0.00	0.09	
v/s Ratio Perm	c0.15		0.07	0.07			c0.16			0.02		
v/c Ratio	0.48	0.19	0.19	0.28	0.16		0.73	0.19		0.11	0.43	
Uniform Delay, d1	14.9	16.6	16.6	22.7	22.3		18.8	17.0		28.3	28.0	
Progression Factor	0.59	0.44	0.60	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.3	0.7	0.5	0.4		6.7	0.1		0.3	0.5	
Delay (s)	9.4	7.6	10.7	23.2	22.7		25.6	17.1		28.6	28.5	
Level of Service	A	A	B	C	C		C	B		C	C	
Approach Delay (s)		9.3			22.9			21.6			28.5	
Approach LOS		A			C			C			C	

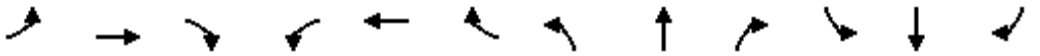
Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	4	529	675	12	41	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		0.95	0.95		1.00	
Frt		1.00	1.00		0.97	
Flt Protected		1.00	1.00		0.96	
Satd. Flow (prot)		3470	3462		1757	
Flt Permitted		0.95	1.00		0.96	
Satd. Flow (perm)		3299	3462		1757	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	4	588	750	13	46	13
RTOR Reduction (vph)	0	0	3	0	8	0
Lane Group Flow (vph)	0	592	760	0	51	0
Heavy Vehicles (%)	4%	4%	4%	4%	1%	1%
Turn Type	Perm					
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)		16.0	16.0		16.0	
Effective Green, g (s)		16.0	16.0		16.0	
Actuated g/C Ratio		0.40	0.40		0.40	
Clearance Time (s)		4.0	4.0		4.0	
Lane Grp Cap (vph)		1320	1385		703	
v/s Ratio Prot			c0.22		c0.03	
v/s Ratio Perm		0.18				
v/c Ratio		0.45	0.55		0.07	
Uniform Delay, d1		8.8	9.2		7.4	
Progression Factor		1.00	0.66		1.00	
Incremental Delay, d2		1.1	1.4		0.2	
Delay (s)		9.9	7.5		7.6	
Level of Service		A	A		A	
Approach Delay (s)		9.9	7.5		7.6	
Approach LOS		A	A		A	

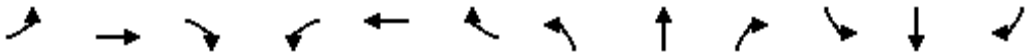
Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	544	227	117	337	0	0	0	0	172	0	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3574	1599	1703	3406						1687	1509
Flt Permitted		1.00	1.00	0.33	1.00						0.95	1.00
Satd. Flow (perm)		3574	1599	598	3406						1687	1509
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	591	247	127	366	0	0	0	0	187	0	157
RTOR Reduction (vph)	0	0	154	0	0	0	0	0	0	0	0	133
Lane Group Flow (vph)	0	591	93	127	366	0	0	0	0	0	187	24
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	7%	7%	7%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		28.0	28.0	53.0	58.0						10.0	10.0
Effective Green, g (s)		30.0	30.0	50.0	54.0						12.0	12.0
Actuated g/C Ratio		0.38	0.38	0.62	0.68						0.15	0.15
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)		1340	600	664	2299						253	226
v/s Ratio Prot		c0.17		c0.05	0.11							
v/s Ratio Perm			0.06	0.07							0.11	0.02
v/c Ratio		0.44	0.15	0.19	0.16						0.74	0.10
Uniform Delay, d1		18.7	16.6	6.4	4.7						32.5	29.4
Progression Factor		1.00	1.00	1.83	0.24						1.00	1.00
Incremental Delay, d2		0.2	0.1	0.1	0.0						17.5	0.9
Delay (s)		19.0	16.7	11.8	1.2						50.0	30.3
Level of Service		B	B	B	A						D	C
Approach Delay (s)		18.3			3.9			0.0			41.0	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	18.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		

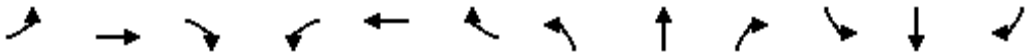
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	345	383	0	0	268	780	211	0	227	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3505	1568		1671	1495			
Flt Permitted	0.58	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1054	3471			3505	1568		1671	1495			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	352	391	0	0	273	796	215	0	232	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	437	0	0	191	0	0	0
Lane Group Flow (vph)	352	391	0	0	273	359	0	215	41	0	0	0
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	8%	8%	8%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	45.0	56.0			28.0	28.0		12.0	12.0			
Effective Green, g (s)	48.0	55.0			30.0	30.0		14.0	14.0			
Actuated g/C Ratio	0.60	0.69			0.38	0.38		0.18	0.18			
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)	794	2386			1314	588		292	262			
v/s Ratio Prot	c0.11	0.11			0.08							
v/s Ratio Perm	0.16					c0.23		0.13	0.03			
v/c Ratio	0.44	0.16			0.21	0.61		0.74	0.15			
Uniform Delay, d1	8.0	4.4			16.9	20.3		31.3	28.0			
Progression Factor	1.45	1.03			0.79	1.37		1.00	1.00			
Incremental Delay, d2	0.4	0.0			0.3	3.3		15.3	1.3			
Delay (s)	12.0	4.6			13.7	31.2		46.5	29.2			
Level of Service	B	A			B	C		D	C			
Approach Delay (s)		8.1			26.7			37.5			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		

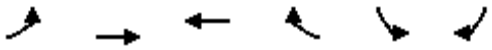
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	258	168	199	24	226	8	522	159	74	27	222	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.95		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1656	3312	1482	1752	3486		1787	3403		1687	3091	
Flt Permitted	0.57	1.00	1.00	0.64	1.00		0.26	1.00		0.60	1.00	
Satd. Flow (perm)	985	3312	1482	1179	3486		489	3403		1062	3091	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	274	179	212	26	240	9	555	169	79	29	236	300
RTOR Reduction (vph)	0	0	148	0	3	0	0	43	0	0	246	0
Lane Group Flow (vph)	274	179	64	26	246	0	555	205	0	29	290	0
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	1%	1%	1%	7%	7%	7%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	30.7	22.3	22.3	16.0	13.6		40.3	34.9		14.8	12.4	
Effective Green, g (s)	29.7	24.3	24.3	14.0	15.6		39.3	36.9		12.8	14.4	
Actuated g/C Ratio	0.37	0.30	0.30	0.18	0.19		0.49	0.46		0.16	0.18	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	450	1006	450	216	680		628	1570		181	556	
v/s Ratio Prot	c0.08	0.05		0.00	0.07		c0.26	0.06		0.00	0.09	
v/s Ratio Perm	c0.15		0.04	0.02			c0.17			0.02		
v/c Ratio	0.61	0.18	0.14	0.12	0.36		0.88	0.13		0.16	0.52	
Uniform Delay, d1	22.4	20.5	20.3	27.8	27.9		17.5	12.4		28.7	29.7	
Progression Factor	0.80	0.81	1.19	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	0.4	0.7	0.3	1.5		13.9	0.0		0.4	0.9	
Delay (s)	20.2	16.9	24.7	28.1	29.4		31.4	12.4		29.1	30.6	
Level of Service	C	B	C	C	C		C	B		C	C	
Approach Delay (s)		20.7			29.3			25.6			30.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

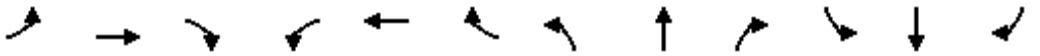
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	39	751	429	34	17	27
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	43	825	471	37	19	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	509				988	254
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	509				988	254
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				92	96
cM capacity (veh/h)	1059				236	748

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	318	550	314	195	48
Volume Left	43	0	0	0	19
Volume Right	0	0	0	37	30
cSH	1059	1700	1700	1700	407
Volume to Capacity	0.04	0.32	0.18	0.11	0.12
Queue Length 95th (ft)	3	0	0	0	10
Control Delay (s)	1.5	0.0	0.0	0.0	15.0
Lane LOS	A				C
Approach Delay (s)	0.6		0.0		15.0
Approach LOS					C

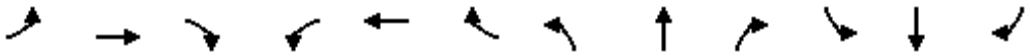
Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	333	250	184	288	0	0	0	0	349	0	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3539	1583	1656	3312						1752	1568
Flt Permitted		1.00	1.00	0.40	1.00						0.95	1.00
Satd. Flow (perm)		3539	1583	700	3312						1752	1568
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	387	291	214	335	0	0	0	0	406	0	474
RTOR Reduction (vph)	0	0	226	0	0	0	0	0	0	0	0	326
Lane Group Flow (vph)	0	387	65	214	335	0	0	0	0	0	406	148
Heavy Vehicles (%)	2%	2%	2%	9%	9%	9%	1%	1%	1%	3%	3%	3%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		15.9	15.9	39.0	45.0						23.0	23.0
Effective Green, g (s)		17.9	17.9	41.0	41.0						25.0	25.0
Actuated g/C Ratio		0.22	0.22	0.51	0.51						0.31	0.31
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)		792	354	647	1697						548	490
v/s Ratio Prot		c0.11		c0.10	0.10							
v/s Ratio Perm			0.04	0.07							0.23	0.09
v/c Ratio		0.49	0.18	0.33	0.20						0.74	0.30
Uniform Delay, d1		27.1	25.1	15.1	10.6						24.6	20.9
Progression Factor		1.00	1.00	0.78	2.04						1.00	1.00
Incremental Delay, d2		0.5	0.3	0.3	0.0						8.7	1.6
Delay (s)		27.5	25.4	12.0	21.6						33.3	22.5
Level of Service		C	C	B	C						C	C
Approach Delay (s)		26.6			17.9			0.0			27.5	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM Average Control Delay	24.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

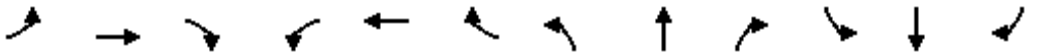
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	509	0	0	207	339	244	0	168	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3252	1455		1556	1392			
Flt Permitted	0.57	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1043	3471			3252	1455		1556	1392			
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	210	613	0	0	249	408	294	0	202	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	311	0	0	139	0	0	0
Lane Group Flow (vph)	210	613	0	0	249	97	0	294	63	0	0	0
Heavy Vehicles (%)	4%	4%	4%	11%	11%	11%	16%	16%	16%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	34.0	46.0			17.0	17.0		23.0	23.0			
Effective Green, g (s)	37.0	48.0			19.0	19.0		25.0	25.0			
Actuated g/C Ratio	0.46	0.60			0.24	0.24		0.31	0.31			
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)	647	2083			772	346		486	435			
v/s Ratio Prot	0.08	c0.18			0.08							
v/s Ratio Perm	0.07					0.07		0.19	0.05			
v/c Ratio	0.32	0.29			0.32	0.28		0.60	0.15			
Uniform Delay, d1	13.2	7.8			25.2	24.9		23.3	19.8			
Progression Factor	0.46	0.20			0.86	2.92		1.00	1.00			
Incremental Delay, d2	0.3	0.1			1.0	1.8		5.5	0.7			
Delay (s)	6.4	1.7			22.7	74.6		28.8	20.5			
Level of Service	A	A			C	E		C	C			
Approach Delay (s)		2.9			54.9			25.4			0.0	
Approach LOS		A			D			C			A	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

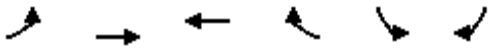
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	277	218	257	38	125	42	269	153	26	16	139	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1703	3406	1524	1612	3102		1770	3463		1612	2941	
Flt Permitted	0.63	1.00	1.00	0.60	1.00		0.27	1.00		0.63	1.00	
Satd. Flow (perm)	1136	3406	1524	1017	3102		506	3463		1061	2941	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	311	245	289	43	140	47	302	172	29	18	156	218
RTOR Reduction (vph)	0	0	174	0	33	0	0	16	0	0	176	0
Lane Group Flow (vph)	311	245	115	43	154	0	302	185	0	18	198	0
Heavy Vehicles (%)	6%	6%	6%	12%	12%	12%	2%	2%	2%	12%	12%	12%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	39.5	29.9	29.9	25.1	21.5		31.5	27.3		14.5	13.3	
Effective Green, g (s)	38.5	31.9	31.9	23.1	23.5		30.5	29.3		12.5	15.3	
Actuated g/C Ratio	0.48	0.40	0.40	0.29	0.29		0.38	0.37		0.16	0.19	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	625	1358	608	313	911		417	1268		167	562	
v/s Ratio Prot	c0.07	0.07		0.00	0.05		c0.13	0.05		0.00	0.07	
v/s Ratio Perm	c0.17		0.08	0.04			c0.15			0.02		
v/c Ratio	0.50	0.18	0.19	0.14	0.17		0.72	0.15		0.11	0.35	
Uniform Delay, d1	14.8	15.6	15.6	21.1	21.0		19.0	17.0		28.9	28.1	
Progression Factor	0.55	0.42	0.41	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.3	0.7	0.2	0.4		6.1	0.1		0.3	0.4	
Delay (s)	8.8	6.9	7.1	21.3	21.4		25.2	17.0		29.2	28.4	
Level of Service	A	A	A	C	C		C	B		C	C	
Approach Delay (s)		7.7			21.4			21.9			28.5	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

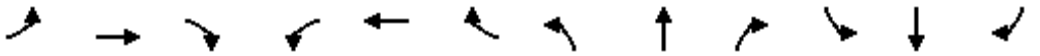
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	5	523	682	16	44	11
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	581	758	18	49	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	776				1068	388
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	776				1068	388
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				77	98
cM capacity (veh/h)	823				217	614

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	199	387	505	270	61
Volume Left	6	0	0	0	49
Volume Right	0	0	0	18	12
cSH	823	1700	1700	1700	249
Volume to Capacity	0.01	0.23	0.30	0.16	0.25
Queue Length 95th (ft)	1	0	0	0	23
Control Delay (s)	0.3	0.0	0.0	0.0	24.1
Lane LOS	A				C
Approach Delay (s)	0.1		0.0		24.1
Approach LOS					C

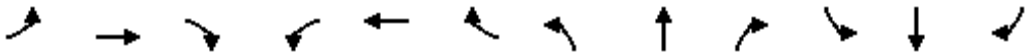
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	532	248	107	353	0	0	0	0	183	0	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3574	1599	1703	3406						1687	1509
Flt Permitted		1.00	1.00	0.35	1.00						0.95	1.00
Satd. Flow (perm)		3574	1599	632	3406						1687	1509
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	578	270	116	384	0	0	0	0	199	0	161
RTOR Reduction (vph)	0	0	159	0	0	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	578	111	116	384	0	0	0	0	0	199	27
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	7%	7%	7%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		35.0	35.0	60.0	65.0						13.0	13.0
Effective Green, g (s)		37.0	37.0	57.0	61.0						15.0	15.0
Actuated g/C Ratio		0.41	0.41	0.63	0.68						0.17	0.17
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)		1469	657	650	2309						281	252
v/s Ratio Prot		c0.16		c0.04	c0.11							
v/s Ratio Perm			0.07	0.07							0.12	0.02
v/c Ratio		0.39	0.17	0.18	0.17						0.71	0.11
Uniform Delay, d1		18.6	16.8	6.8	5.3						35.4	31.8
Progression Factor		1.00	1.00	0.77	0.00						1.00	1.00
Incremental Delay, d2		0.2	0.1	0.1	0.0						14.0	0.8
Delay (s)		18.8	16.9	5.4	0.0						49.5	32.7
Level of Service		B	B	A	A						D	C
Approach Delay (s)		18.2			1.3			0.0			42.0	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

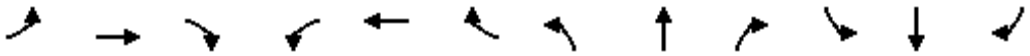
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	348	0	0	279	780	225	0	256	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3505	1568		1671	1495			
Flt Permitted	0.56	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1030	3471			3505	1568		1671	1495			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	367	355	0	0	285	796	230	0	261	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	420	0	0	212	0	0	0
Lane Group Flow (vph)	367	355	0	0	285	376	0	230	49	0	0	0
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	8%	8%	8%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	57.0	63.0			35.0	35.0		15.0	15.0			
Effective Green, g (s)	59.0	62.0			37.0	37.0		17.0	17.0			
Actuated g/C Ratio	0.66	0.69			0.41	0.41		0.19	0.19			
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)	856	2391			1441	645		316	282			
v/s Ratio Prot	c0.11	0.10			0.08							
v/s Ratio Perm	0.17					c0.24		0.14	0.03			
v/c Ratio	0.43	0.15			0.20	0.58		0.73	0.17			
Uniform Delay, d1	8.6	4.9			17.0	20.5		34.3	30.6			
Progression Factor	1.16	1.35			0.83	0.87		1.00	1.00			
Incremental Delay, d2	0.3	0.0			0.2	2.6		13.7	1.3			
Delay (s)	10.3	6.6			14.4	20.5		48.0	32.0			
Level of Service	B	A			B	C		D	C			
Approach Delay (s)		8.5			18.9			39.5			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

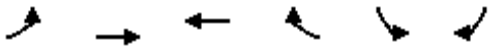
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	286	184	188	23	225	9	513	136	34	31	174	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1656	3312	1482	1752	3484		1787	3468		1687	3055	
Flt Permitted	0.45	1.00	1.00	0.63	1.00		0.28	1.00		0.64	1.00	
Satd. Flow (perm)	789	3312	1482	1159	3484		530	3468		1132	3055	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	304	196	200	24	239	10	546	145	36	33	185	316
RTOR Reduction (vph)	0	0	124	0	3	0	0	22	0	0	270	0
Lane Group Flow (vph)	304	196	76	24	246	0	546	159	0	33	231	0
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	1%	1%	1%	7%	7%	7%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	37.7	32.3	32.3	21.7	19.3		40.3	33.7		14.8	11.2	
Effective Green, g (s)	36.7	34.3	34.3	19.7	21.3		39.3	35.7		12.8	13.2	
Actuated g/C Ratio	0.41	0.38	0.38	0.22	0.24		0.44	0.40		0.14	0.15	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	460	1262	565	263	825		582	1376		177	448	
v/s Ratio Prot	c0.11	0.06		0.00	0.07		c0.26	0.05		0.01	0.08	
v/s Ratio Perm	c0.16		0.05	0.02			c0.15			0.02		
v/c Ratio	0.66	0.16	0.13	0.09	0.30		0.94	0.12		0.19	0.52	
Uniform Delay, d1	19.6	18.3	18.2	27.8	28.2		21.7	17.2		33.8	35.5	
Progression Factor	1.01	1.02	1.66	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.5	0.3	0.5	0.2	0.9		22.9	0.0		0.5	1.0	
Delay (s)	23.3	18.9	30.7	28.0	29.1		44.6	17.2		34.3	36.5	
Level of Service	C	B	C	C	C		D	B		C	D	
Approach Delay (s)		24.2			29.0			37.8			36.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	32.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

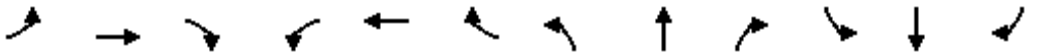
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	51	788	434	35	14	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	56	866	477	38	15	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	515				1041	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	515				1041	258
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				93	95
cM capacity (veh/h)	1054				215	744

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	345	577	318	197	54
Volume Left	56	0	0	0	15
Volume Right	0	0	0	38	38
cSH	1054	1700	1700	1700	437
Volume to Capacity	0.05	0.34	0.19	0.12	0.12
Queue Length 95th (ft)	4	0	0	0	10
Control Delay (s)	1.9	0.0	0.0	0.0	14.4
Lane LOS	A				B
Approach Delay (s)	0.7		0.0		14.4
Approach LOS					B

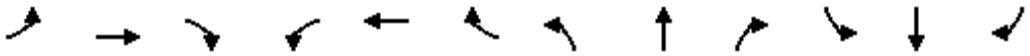
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	376	338	207	340	0	0	0	0	407	0	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3539	1583	1656	3312						1752	1568
Flt Permitted		1.00	1.00	0.36	1.00						0.95	1.00
Satd. Flow (perm)		3539	1583	630	3312						1752	1568
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	437	393	241	395	0	0	0	0	473	0	640
RTOR Reduction (vph)	0	0	300	0	0	0	0	0	0	0	0	316
Lane Group Flow (vph)	0	437	93	241	395	0	0	0	0	0	473	324
Heavy Vehicles (%)	2%	2%	2%	9%	9%	9%	1%	1%	1%	3%	3%	3%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		17.0	17.0	34.0	45.0						23.0	23.0
Effective Green, g (s)		19.0	19.0	37.0	41.0						25.0	25.0
Actuated g/C Ratio		0.24	0.24	0.46	0.51						0.31	0.31
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)		841	376	535	1697						548	490
v/s Ratio Prot		c0.12		c0.11	0.12							
v/s Ratio Perm			0.06	0.10							0.27	0.21
v/c Ratio		0.52	0.25	0.45	0.23						0.86	0.66
Uniform Delay, d1		26.5	24.7	13.7	10.8						25.9	23.8
Progression Factor		1.00	1.00	1.31	1.71						1.00	1.00
Incremental Delay, d2		0.5	0.3	0.6	0.1						16.4	6.9
Delay (s)		27.1	25.1	18.6	18.5						42.3	30.7
Level of Service		C	C	B	B						D	C
Approach Delay (s)		26.1			18.5			0.0			35.6	
Approach LOS		C			B			A			D	

Intersection Summary			
HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		

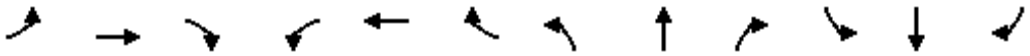
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	196	622	0	0	257	382	255	0	171	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3252	1455		1556	1392			
Flt Permitted	0.50	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	910	3471			3252	1455		1556	1392			
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	236	749	0	0	310	460	307	0	206	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	351	0	0	142	0	0	0
Lane Group Flow (vph)	236	749	0	0	310	109	0	307	64	0	0	0
Heavy Vehicles (%)	4%	4%	4%	11%	11%	11%	16%	16%	16%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	39.0	45.0			17.0	17.0		23.0	23.0			
Effective Green, g (s)	41.0	44.0			19.0	19.0		25.0	25.0			
Actuated g/C Ratio	0.51	0.55			0.24	0.24		0.31	0.31			
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)	704	1909			772	346		486	435			
v/s Ratio Prot	0.10	c0.22			c0.10							
v/s Ratio Perm	0.08					0.08		0.20	0.05			
v/c Ratio	0.34	0.39			0.40	0.32		0.63	0.15			
Uniform Delay, d1	13.7	10.3			25.7	25.1		23.6	19.8			
Progression Factor	0.38	1.27			0.60	1.47		1.00	1.00			
Incremental Delay, d2	0.3	0.1			1.2	1.9		6.1	0.7			
Delay (s)	5.5	13.2			16.7	38.9		29.7	20.5			
Level of Service	A	B			B	D		C	C			
Approach Delay (s)		11.4			30.0			26.0			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		

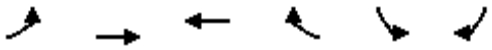
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	313	220	342	174	141	49	292	318	45	18	348	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1703	3406	1524	1612	3098		1770	3473		1612	3037	
Flt Permitted	0.48	1.00	1.00	0.60	1.00		0.20	1.00		0.51	1.00	
Satd. Flow (perm)	865	3406	1524	1015	3098		380	3473		869	3037	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	352	247	384	196	158	55	328	357	51	20	391	246
RTOR Reduction (vph)	0	0	259	0	43	0	0	13	0	0	117	0
Lane Group Flow (vph)	352	247	125	196	170	0	328	395	0	20	520	0
Heavy Vehicles (%)	6%	6%	6%	12%	12%	12%	2%	2%	2%	12%	12%	12%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	33.3	24.0	24.0	22.1	15.8		34.7	29.3		19.0	16.6	
Effective Green, g (s)	32.3	26.0	26.0	20.1	17.8		33.7	31.3		17.0	18.6	
Actuated g/C Ratio	0.40	0.32	0.32	0.25	0.22		0.42	0.39		0.21	0.23	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	491	1107	495	295	689		405	1359		198	706	
v/s Ratio Prot	c0.12	0.07		0.04	0.05		c0.14	0.11		0.00	0.17	
v/s Ratio Perm	c0.17		0.08	0.12			c0.20			0.02		
v/c Ratio	0.72	0.22	0.25	0.66	0.25		0.81	0.29		0.10	0.74	
Uniform Delay, d1	18.1	19.6	19.9	25.8	25.6		18.1	16.7		25.1	28.4	
Progression Factor	0.52	0.59	2.39	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.7	0.4	1.2	5.5	0.9		11.4	0.1		0.2	4.0	
Delay (s)	14.1	12.0	48.5	31.4	26.4		29.4	16.8		25.3	32.4	
Level of Service	B	B	D	C	C		C	B		C	C	
Approach Delay (s)		27.0			28.8			22.5			32.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

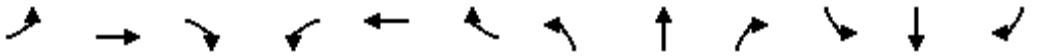
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	8	690	869	20	50	19
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	9	767	966	22	56	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	988				1378	494
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	988				1378	494
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				59	96
cM capacity (veh/h)	683				135	524

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	264	511	644	344	77
Volume Left	9	0	0	0	56
Volume Right	0	0	0	22	21
cSH	683	1700	1700	1700	170
Volume to Capacity	0.01	0.30	0.38	0.20	0.45
Queue Length 95th (ft)	1	0	0	0	52
Control Delay (s)	0.5	0.0	0.0	0.0	42.5
Lane LOS	A				E
Approach Delay (s)	0.2		0.0		42.5
Approach LOS					E

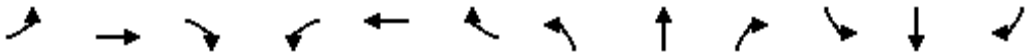
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	719	279	139	398	0	0	0	0	199	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3574	1599	1703	3406						1687	1509
Flt Permitted		1.00	1.00	0.24	1.00						0.95	1.00
Satd. Flow (perm)		3574	1599	430	3406						1687	1509
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	782	303	151	433	0	0	0	0	216	0	168
RTOR Reduction (vph)	0	0	178	0	0	0	0	0	0	0	0	140
Lane Group Flow (vph)	0	782	125	151	433	0	0	0	0	0	216	28
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	7%	7%	7%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		35.0	35.0	60.0	65.0						13.0	13.0
Effective Green, g (s)		37.0	37.0	57.0	61.0						15.0	15.0
Actuated g/C Ratio		0.41	0.41	0.63	0.68						0.17	0.17
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)		1469	657	569	2309						281	252
v/s Ratio Prot		c0.22		c0.06	0.13							
v/s Ratio Perm			0.08	0.11							0.13	0.02
v/c Ratio		0.53	0.19	0.27	0.19						0.77	0.11
Uniform Delay, d1		20.0	16.9	7.6	5.4						35.8	31.8
Progression Factor		1.00	1.00	2.42	0.01						1.00	1.00
Incremental Delay, d2		0.4	0.1	0.2	0.0						18.1	0.9
Delay (s)		20.4	17.1	18.7	0.1						54.0	32.7
Level of Service		C	B	B	A						D	C
Approach Delay (s)		19.4			4.9			0.0			44.7	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	20.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

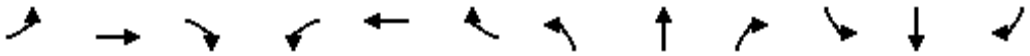
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	405	560	0	0	314	879	254	0	289	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3505	1568		1671	1495			
Flt Permitted	0.54	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	978	3471			3505	1568		1671	1495			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	413	571	0	0	320	897	259	0	295	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	401	0	0	239	0	0	0
Lane Group Flow (vph)	413	571	0	0	320	496	0	259	56	0	0	0
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	8%	8%	8%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	57.0	63.0			35.0	35.0		15.0	15.0			
Effective Green, g (s)	59.0	62.0			37.0	37.0		17.0	17.0			
Actuated g/C Ratio	0.66	0.69			0.41	0.41		0.19	0.19			
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)	835	2391			1441	645		316	282			
v/s Ratio Prot	c0.13	0.16			0.09							
v/s Ratio Perm	0.20					c0.32		0.15	0.04			
v/c Ratio	0.49	0.24			0.22	0.77		0.82	0.20			
Uniform Delay, d1	9.8	5.2			17.2	22.8		35.0	30.8			
Progression Factor	1.10	1.00			1.16	1.47		1.00	1.00			
Incremental Delay, d2	0.4	0.0			0.2	4.7		20.6	1.6			
Delay (s)	11.3	5.2			20.0	38.2		55.7	32.3			
Level of Service	B	A			C	D		E	C			
Approach Delay (s)		7.8			33.4			43.2			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

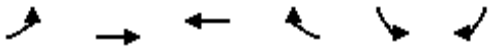
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	251	268	30	259	11	578	222	164	35	346	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1656	3312	1482	1752	3483		1787	3347		1687	3125	
Flt Permitted	0.49	1.00	1.00	0.52	1.00		0.22	1.00		0.51	1.00	
Satd. Flow (perm)	858	3312	1482	960	3483		411	3347		908	3125	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	343	267	285	32	276	12	615	236	174	37	368	356
RTOR Reduction (vph)	0	0	203	0	3	0	0	91	0	0	191	0
Lane Group Flow (vph)	343	267	82	32	285	0	615	319	0	37	533	0
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	1%	1%	1%	7%	7%	7%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	33.5	23.9	23.9	17.2	13.6		47.5	40.9		18.9	15.3	
Effective Green, g (s)	32.5	25.9	25.9	15.2	15.6		46.5	42.9		16.9	17.3	
Actuated g/C Ratio	0.36	0.29	0.29	0.17	0.17		0.52	0.48		0.19	0.19	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	424	953	426	185	604		643	1595		193	601	
v/s Ratio Prot	c0.12	0.08		0.00	0.08		c0.30	0.10		0.01	0.17	
v/s Ratio Perm	c0.18		0.06	0.02			c0.19			0.03		
v/c Ratio	0.81	0.28	0.19	0.17	0.47		0.96	0.20		0.19	0.89	
Uniform Delay, d1	27.1	24.8	24.2	33.3	33.5		22.2	13.6		30.4	35.4	
Progression Factor	1.08	0.95	1.93	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.5	0.7	1.0	0.4	2.6		24.9	0.1		0.5	14.6	
Delay (s)	39.7	24.2	47.5	33.7	36.1		47.1	13.7		30.8	50.0	
Level of Service	D	C	D	C	D		D	B		C	D	
Approach Delay (s)		37.6			35.9			33.7			49.1	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		

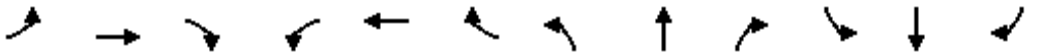
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	57	939	489	42	26	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	63	1032	537	46	29	44
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	584				1202	292
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	584				1202	292
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				83	94
cM capacity (veh/h)	994				167	708

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	407	688	358	225	73
Volume Left	63	0	0	0	29
Volume Right	0	0	0	46	44
cSH	994	1700	1700	1700	312
Volume to Capacity	0.06	0.40	0.21	0.13	0.23
Queue Length 95th (ft)	5	0	0	0	22
Control Delay (s)	2.0	0.0	0.0	0.0	20.0
Lane LOS	A				C
Approach Delay (s)	0.7		0.0		20.0
Approach LOS					C

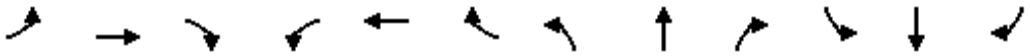
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	532	248	107	353	0	0	0	0	183	0	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3574	1599	1703	3406					1603	1603	1509
Flt Permitted		1.00	1.00	0.22	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3574	1599	393	3406					1603	1603	1509
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	578	270	116	384	0	0	0	0	199	0	161
RTOR Reduction (vph)	0	0	206	0	0	0	0	0	0	0	0	109
Lane Group Flow (vph)	0	578	64	116	384	0	0	0	0	99	100	52
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	7%	7%	7%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		19.2	19.2	45.2	51.2					26.8	26.8	26.8
Effective Green, g (s)		21.2	21.2	47.2	47.2					28.8	28.8	28.8
Actuated g/C Ratio		0.24	0.24	0.52	0.52					0.32	0.32	0.32
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)		842	377	599	1786					513	513	483
v/s Ratio Prot		c0.16		0.06	c0.11							
v/s Ratio Perm			0.04	0.04						0.06	0.06	0.03
v/c Ratio		0.69	0.17	0.19	0.22					0.19	0.19	0.11
Uniform Delay, d1		31.4	27.4	11.6	11.5					22.2	22.2	21.5
Progression Factor		1.00	1.00	1.21	0.45					1.00	1.00	1.00
Incremental Delay, d2		2.3	0.2	0.2	0.1					0.8	0.8	0.4
Delay (s)		33.7	27.6	14.2	5.2					23.0	23.0	22.0
Level of Service		C	C	B	A					C	C	C
Approach Delay (s)		31.8			7.3			0.0			22.6	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

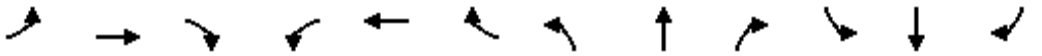
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	360	348	0	0	279	780	225	0	256	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3505	1568		1671	1495			
Flt Permitted	0.55	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	1011	3471			3505	1568		1671	1495			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	367	355	0	0	285	796	230	0	261	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	418	0	0	209	0	0	0
Lane Group Flow (vph)	367	355	0	0	285	378	0	230	52	0	0	0
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	8%	8%	8%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	57.0	62.0			30.0	30.0		16.0	16.0			
Effective Green, g (s)	54.0	61.0			32.0	32.0		18.0	18.0			
Actuated g/C Ratio	0.60	0.68			0.36	0.36		0.20	0.20			
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)	792	2353			1246	558		334	299			
v/s Ratio Prot	c0.12	0.10			0.08							
v/s Ratio Perm	0.16					c0.24		0.14	0.03			
v/c Ratio	0.46	0.15			0.23	0.68		0.69	0.17			
Uniform Delay, d1	9.1	5.2			20.3	24.6		33.4	29.8			
Progression Factor	0.46	0.00			1.12	1.53		1.00	1.00			
Incremental Delay, d2	0.3	0.0			0.3	4.7		11.0	1.3			
Delay (s)	4.5	0.0			23.1	42.4		44.4	31.1			
Level of Service	A	A			C	D		D	C			
Approach Delay (s)		2.3			37.3			37.4			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

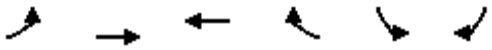
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	286	184	188	23	225	9	513	136	34	31	174	297
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1656	3312	1482	1752	3484		1787	3468		1687	3055	
Flt Permitted	0.46	1.00	1.00	0.63	1.00		0.28	1.00		0.64	1.00	
Satd. Flow (perm)	810	3312	1482	1159	3484		523	3468		1132	3055	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	304	196	200	24	239	10	546	145	36	33	185	316
RTOR Reduction (vph)	0	0	125	0	3	0	0	22	0	0	269	0
Lane Group Flow (vph)	304	196	75	24	246	0	546	159	0	33	232	0
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	1%	1%	1%	7%	7%	7%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	37.3	31.9	31.9	23.2	20.8		40.7	34.1		15.0	11.4	
Effective Green, g (s)	36.3	33.9	33.9	21.2	22.8		39.7	36.1		13.0	13.4	
Actuated g/C Ratio	0.40	0.38	0.38	0.24	0.25		0.44	0.40		0.14	0.15	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	444	1248	558	282	883		586	1391		180	455	
v/s Ratio Prot	c0.10	0.06		0.00	0.07		c0.26	0.05		0.01	0.08	
v/s Ratio Perm	c0.18		0.05	0.02			c0.15			0.02		
v/c Ratio	0.68	0.16	0.14	0.09	0.28		0.93	0.11		0.18	0.51	
Uniform Delay, d1	19.8	18.6	18.4	26.7	27.0		21.6	16.9		33.6	35.3	
Progression Factor	0.76	0.67	0.24	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	0.3	0.5	0.1	0.8		21.8	0.0		0.5	0.9	
Delay (s)	19.4	12.8	5.0	26.8	27.8		43.4	17.0		34.1	36.2	
Level of Service	B	B	A	C	C		D	B		C	D	
Approach Delay (s)		13.4			27.7			36.8			36.0	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

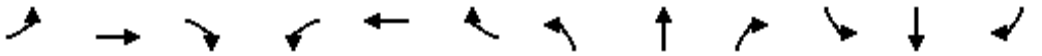
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	51	788	434	35	14	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	56	866	477	38	15	38
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	515				1041	258
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	515				1041	258
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				93	95
cM capacity (veh/h)	1054				215	744

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	345	577	318	197	54
Volume Left	56	0	0	0	15
Volume Right	0	0	0	38	38
cSH	1054	1700	1700	1700	437
Volume to Capacity	0.05	0.34	0.19	0.12	0.12
Queue Length 95th (ft)	4	0	0	0	10
Control Delay (s)	1.9	0.0	0.0	0.0	14.4
Lane LOS	A				B
Approach Delay (s)	0.7		0.0		14.4
Approach LOS					B

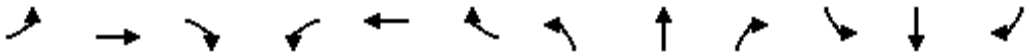
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	719	279	139	398	0	0	0	0	199	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3574	1599	1703	3406					1603	1603	1509
Flt Permitted		1.00	1.00	0.18	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3574	1599	317	3406					1603	1603	1509
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	782	303	151	433	0	0	0	0	216	0	168
RTOR Reduction (vph)	0	0	205	0	0	0	0	0	0	0	0	121
Lane Group Flow (vph)	0	782	98	151	433	0	0	0	0	108	108	47
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	7%	7%	7%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		27.0	27.0	49.0	55.0					23.0	23.0	23.0
Effective Green, g (s)		29.0	29.0	51.0	51.0					25.0	25.0	25.0
Actuated g/C Ratio		0.32	0.32	0.57	0.57					0.28	0.28	0.28
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)		1152	515	534	1930					445	445	419
v/s Ratio Prot		c0.22		c0.07	0.13							
v/s Ratio Perm			0.06	0.09						c0.07	0.07	0.03
v/c Ratio		0.68	0.19	0.28	0.22					0.24	0.24	0.11
Uniform Delay, d1		26.5	22.0	10.7	9.7					25.2	25.2	24.2
Progression Factor		1.00	1.00	1.18	0.38					1.00	1.00	1.00
Incremental Delay, d2		1.6	0.2	0.3	0.1					1.3	1.3	0.5
Delay (s)		28.1	22.2	12.9	3.8					26.5	26.5	24.8
Level of Service		C	C	B	A					C	C	C
Approach Delay (s)		26.4			6.1			0.0			25.7	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

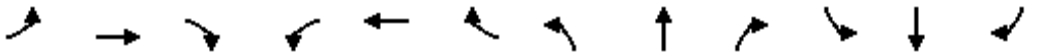
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	405	560	0	0	314	879	254	0	289	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3505	1568		1671	1495			
Flt Permitted	0.49	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	904	3471			3505	1568		1671	1495			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	413	571	0	0	320	897	259	0	295	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	555	0	0	193	0	0	0
Lane Group Flow (vph)	413	571	0	0	320	342	0	259	102	0	0	0
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	8%	8%	8%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	44.0	49.0			23.0	23.0		29.0	29.0			
Effective Green, g (s)	41.0	48.0			25.0	25.0		31.0	31.0			
Actuated g/C Ratio	0.46	0.53			0.28	0.28		0.34	0.34			
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)	569	1851			974	436		576	515			
v/s Ratio Prot	c0.14	0.16			0.09							
v/s Ratio Perm	0.19					c0.22		0.15	0.07			
v/c Ratio	0.73	0.31			0.33	0.79		0.45	0.20			
Uniform Delay, d1	17.6	11.7			25.8	30.0		22.9	20.7			
Progression Factor	1.17	0.42			1.07	1.56		1.00	1.00			
Incremental Delay, d2	3.4	0.1			0.4	6.4		2.5	0.9			
Delay (s)	24.0	5.0			28.1	53.2		25.4	21.6			
Level of Service	C	A			C	D		C	C			
Approach Delay (s)		13.0			46.6			23.4			0.0	
Approach LOS		B			D			C			A	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

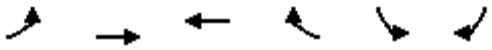
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	251	268	30	259	11	578	222	164	35	346	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1656	3312	1482	1752	3483		1787	3347		1687	3125	
Flt Permitted	0.37	1.00	1.00	0.59	1.00		0.22	1.00		0.51	1.00	
Satd. Flow (perm)	637	3312	1482	1083	3483		413	3347		908	3125	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	343	267	285	32	276	12	615	236	174	37	368	356
RTOR Reduction (vph)	0	0	193	0	3	0	0	97	0	0	192	0
Lane Group Flow (vph)	343	267	92	32	285	0	615	313	0	37	532	0
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	1%	1%	1%	7%	7%	7%
Turn Type	pm+pt		Perm	pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	33.8	27.2	27.2	18.9	15.3		44.2	37.6		18.8	15.2	
Effective Green, g (s)	32.8	29.2	29.2	16.9	17.3		43.2	39.6		16.8	17.2	
Actuated g/C Ratio	0.36	0.32	0.32	0.19	0.19		0.48	0.44		0.19	0.19	
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0		3.0	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)	396	1075	481	223	670		580	1473		192	597	
v/s Ratio Prot	c0.14	0.08		0.00	0.08		c0.29	0.09		0.01	0.17	
v/s Ratio Perm	c0.18		0.06	0.02			c0.21			0.03		
v/c Ratio	0.87	0.25	0.19	0.14	0.43		1.06	0.21		0.19	0.89	
Uniform Delay, d1	23.5	22.3	21.9	30.2	32.0		23.7	15.6		30.4	35.5	
Progression Factor	1.34	0.93	1.12	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.1	0.5	0.9	0.3	2.0		54.4	0.1		0.5	15.5	
Delay (s)	48.6	21.2	25.5	30.5	33.9		78.0	15.6		30.9	51.0	
Level of Service	D	C	C	C	C		E	B		C	D	
Approach Delay (s)		33.1			33.6			53.1			50.0	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.0%	ICU Level of Service	F
Analysis Period (min)	15		

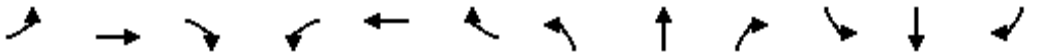
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	57	939	489	42	26	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	63	1032	537	46	29	44
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	584				1202	292
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	584				1202	292
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				83	94
cM capacity (veh/h)	994				167	708

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	407	688	358	225	73
Volume Left	63	0	0	0	29
Volume Right	0	0	0	46	44
cSH	994	1700	1700	1700	312
Volume to Capacity	0.06	0.40	0.21	0.13	0.23
Queue Length 95th (ft)	5	0	0	0	22
Control Delay (s)	2.0	0.0	0.0	0.0	20.0
Lane LOS	A				C
Approach Delay (s)	0.7		0.0		20.0
Approach LOS					C

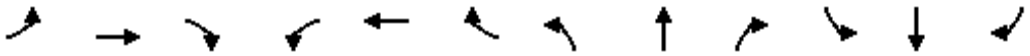
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	719	279	139	398	0	0	0	0	199	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95					0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		3574	1599	1703	3406					1603	1603	1509
Flt Permitted		1.00	1.00	0.19	1.00					0.95	0.95	1.00
Satd. Flow (perm)		3574	1599	338	3406					1603	1603	1509
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	782	303	151	433	0	0	0	0	216	0	168
RTOR Reduction (vph)	0	0	201	0	0	0	0	0	0	0	0	123
Lane Group Flow (vph)	0	782	102	151	433	0	0	0	0	108	108	45
Heavy Vehicles (%)	1%	1%	1%	6%	6%	6%	1%	1%	1%	7%	7%	7%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		28.2	28.2	50.0	56.0					22.0	22.0	22.0
Effective Green, g (s)		30.2	30.2	52.0	52.0					24.0	24.0	24.0
Actuated g/C Ratio		0.34	0.34	0.58	0.58					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)		1199	537	541	1968					427	427	402
v/s Ratio Prot		c0.22		c0.07	0.13							
v/s Ratio Perm			0.06	0.09						c0.07	0.07	0.03
v/c Ratio		0.65	0.19	0.28	0.22					0.25	0.25	0.11
Uniform Delay, d1		25.4	21.2	10.2	9.2					26.0	26.0	24.9
Progression Factor		1.00	1.00	1.11	0.37					1.00	1.00	1.00
Incremental Delay, d2		2.8	0.8	0.3	0.1					1.4	1.4	0.6
Delay (s)		28.2	22.0	11.6	3.5					27.4	27.4	25.5
Level of Service		C	C	B	A					C	C	C
Approach Delay (s)		26.5			5.6			0.0			26.6	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

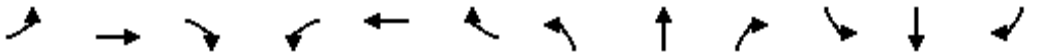
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	405	560	0	0	314	879	254	0	289	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	2.0		4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00		1.00	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (prot)	1736	3471			3505	1568		1671	1495			
Flt Permitted	0.50	1.00			1.00	1.00		0.95	1.00			
Satd. Flow (perm)	911	3471			3505	1568		1671	1495			
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	413	571	0	0	320	897	259	0	295	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	219	0	0	0
Lane Group Flow (vph)	413	571	0	0	320	897	0	259	76	0	0	0
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	8%	8%	8%	1%	1%	1%
Turn Type	D.P+P					Free	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					Free	1		1			
Actuated Green, G (s)	51.8	56.8			23.8	90.0		21.2	21.2			
Effective Green, g (s)	48.8	55.8			25.8	90.0		23.2	23.2			
Actuated g/C Ratio	0.54	0.62			0.29	1.00		0.26	0.26			
Clearance Time (s)					6.0			6.0	6.0			
Vehicle Extension (s)					3.0			3.0	3.0			
Lane Grp Cap (vph)	714	2152			1005	1568		431	385			
v/s Ratio Prot	0.15	0.16			0.09							
v/s Ratio Perm	0.16					c0.57		0.15	0.05			
v/c Ratio	0.58	0.27			0.32	0.57		0.60	0.20			
Uniform Delay, d1	12.4	7.8			25.2	0.0		29.3	26.1			
Progression Factor	0.95	0.21			1.06	1.00		1.00	1.00			
Incremental Delay, d2	0.9	0.1			0.1	0.9		6.1	1.1			
Delay (s)	12.6	1.7			26.9	0.9		35.4	27.3			
Level of Service	B	A			C	A		D	C			
Approach Delay (s)		6.3			7.7			31.1			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

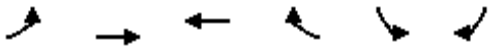
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	322	251	268	30	259	11	578	222	164	35	346	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		7.0	4.0		7.0	4.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3213	3312	1482	1752	3483		1787	3347		1687	3374	1509
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.25	1.00		0.51	1.00	1.00
Satd. Flow (perm)	3213	3312	1482	1752	3483		470	3347		908	3374	1509
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	343	267	285	32	276	12	615	236	174	37	368	356
RTOR Reduction (vph)	0	0	192	0	3	0	0	85	0	0	0	286
Lane Group Flow (vph)	343	267	93	32	285	0	615	325	0	37	368	70
Heavy Vehicles (%)	9%	9%	9%	3%	3%	3%	1%	1%	1%	7%	7%	7%
Turn Type	Prot		Perm	Prot			pm+pt			Perm		Perm
Protected Phases	5	2		1	6		3	8			4	
Permitted Phases			2				8			4		4
Actuated Green, G (s)	13.0	27.4	27.4	3.6	18.0		44.0	44.0		10.0	10.0	10.0
Effective Green, g (s)	12.0	29.4	29.4	2.6	20.0		43.0	46.0		9.0	12.0	10.0
Actuated g/C Ratio	0.13	0.33	0.33	0.03	0.22		0.48	0.51		0.10	0.13	0.11
Clearance Time (s)	3.0	6.0	6.0	3.0	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	3.0
Lane Grp Cap (vph)	428	1082	484	51	774		620	1711		91	450	168
v/s Ratio Prot	c0.11	0.08		0.02	c0.08		c0.30	0.10			0.11	
v/s Ratio Perm			0.06				c0.18			0.04		0.05
v/c Ratio	0.80	0.25	0.19	0.63	0.37		0.99	0.19		0.41	0.82	0.42
Uniform Delay, d1	37.8	22.2	21.8	43.2	29.6		22.9	11.9		38.0	37.9	37.3
Progression Factor	0.79	0.82	2.05	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.0	0.5	0.9	21.7	1.3		33.9	0.1		2.9	11.0	1.7
Delay (s)	39.7	18.7	45.4	64.9	31.0		56.8	12.0		40.9	49.0	38.9
Level of Service	D	B	D	E	C		E	B		D	D	D
Approach Delay (s)		35.3			34.4			38.9			43.9	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	38.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

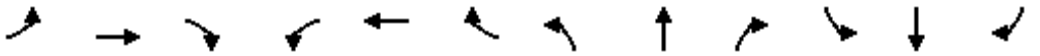
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	57	939	489	42	26	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	63	1032	537	46	29	44
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			988			
pX, platoon unblocked						
vC, conflicting volume	584				1202	292
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	584				1202	292
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				83	94
cM capacity (veh/h)	994				167	708

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	407	688	358	225	73
Volume Left	63	0	0	0	29
Volume Right	0	0	0	46	44
cSH	994	1700	1700	1700	312
Volume to Capacity	0.06	0.40	0.21	0.13	0.23
Queue Length 95th (ft)	5	0	0	0	22
Control Delay (s)	2.0	0.0	0.0	0.0	20.0
Lane LOS	A				C
Approach Delay (s)	0.7		0.0		20.0
Approach LOS					C

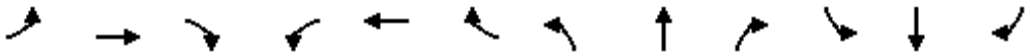
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	95	0	45	170	180	0	0	230	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1787	1599	1787	3574			3505	1568
Flt Permitted					0.95	1.00	0.56	1.00			1.00	1.00
Satd. Flow (perm)					1787	1599	1060	3574			3505	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	107	0	51	191	202	0	0	258	62
RTOR Reduction (vph)	0	0	0	0	0	38	0	0	0	0	0	43
Lane Group Flow (vph)	0	0	0	0	107	13	191	202	0	0	258	19
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Turn Type				Perm		Perm	D.P+P					Perm
Protected Phases					1		4 12	2 4 12			2	
Permitted Phases				1		1	2					2
Actuated Green, G (s)					21.0	21.0	50.5	57.0			24.5	24.5
Effective Green, g (s)					23.0	23.0	48.5	59.0			27.0	27.0
Actuated g/C Ratio					0.26	0.26	0.54	0.66			0.30	0.30
Clearance Time (s)					6.0	6.0					6.5	6.5
Vehicle Extension (s)					3.0	3.0					3.0	3.0
Lane Grp Cap (vph)					457	409	773	2343			1052	470
v/s Ratio Prot							c0.07	c0.06			c0.07	
v/s Ratio Perm					0.06	0.01	0.06					0.01
v/c Ratio					0.23	0.03	0.25	0.09			0.25	0.04
Uniform Delay, d1					26.5	25.1	12.2	5.7			23.8	22.3
Progression Factor					1.00	1.00	0.58	1.39			1.00	1.00
Incremental Delay, d2					1.2	0.1	0.2	0.0			0.6	0.2
Delay (s)					27.7	25.3	7.2	7.9			24.4	22.5
Level of Service					C	C	A	A			C	C
Approach Delay (s)		0.0			26.9			7.6			24.0	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	17.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

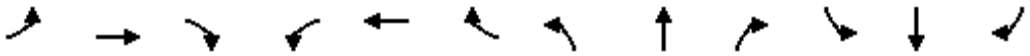
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	5	255	0	0	0	0	255	260	45	280	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00					0.95	1.00	1.00	0.95	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1744	1553					3471	1553	1736	3471	
Flt Permitted		0.95	1.00					1.00	1.00	0.55	1.00	
Satd. Flow (perm)		1744	1553					3471	1553	999	3471	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	5	277	0	0	0	0	277	283	49	304	0
RTOR Reduction (vph)	0	0	206	0	0	0	0	0	195	0	0	0
Lane Group Flow (vph)	0	108	71	0	0	0	0	277	88	49	304	0
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm						Perm	D.P+P		
Protected Phases		6						16		5 8	5 8 16	
Permitted Phases	6		6						16	16		
Actuated Green, G (s)		21.0	21.0					25.5	25.5	47.5	60.0	
Effective Green, g (s)		23.0	23.0					28.0	28.0	44.5	44.5	
Actuated g/C Ratio		0.26	0.26					0.31	0.31	0.49	0.49	
Clearance Time (s)		6.0	6.0					6.5	6.5			
Vehicle Extension (s)		3.0	3.0					3.0	3.0			
Lane Grp Cap (vph)		446	397					1080	483	658	1716	
v/s Ratio Prot								c0.08		0.02	c0.09	
v/s Ratio Perm		0.06	0.05						0.06	0.02		
v/c Ratio		0.24	0.18					0.26	0.18	0.07	0.18	
Uniform Delay, d1		26.6	26.1					23.2	22.6	11.8	12.6	
Progression Factor		1.00	1.00					1.00	1.00	0.02	0.01	
Incremental Delay, d2		1.3	1.0					0.6	0.8	0.2	0.2	
Delay (s)		27.9	27.1					23.8	23.5	0.4	0.4	
Level of Service		C	C					C	C	A	A	
Approach Delay (s)		27.3			0.0			23.6			0.4	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

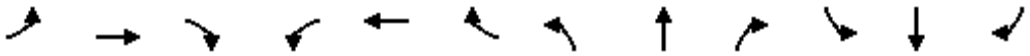
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	5	25	50	10	5	35	130	60	5	215	5
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	5	5	26	52	10	5	36	134	62	5	222	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								844				
pX, platoon unblocked												
vC, conflicting volume	384	503	224	500	474	98	227			196		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	384	503	224	500	474	98	227			196		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	97	88	98	99	97			100		
cM capacity (veh/h)	524	455	779	427	475	942	1339			1382		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	36	67	103	129	232
Volume Left	5	52	36	0	5
Volume Right	26	5	0	62	5
cSH	665	453	1339	1700	1382
Volume to Capacity	0.05	0.15	0.03	0.08	0.00
Queue Length 95th (ft)	4	13	2	0	0
Control Delay (s)	10.7	14.3	2.9	0.0	0.2
Lane LOS	B	B	A		A
Approach Delay (s)	10.7	14.3	1.3		0.2
Approach LOS	B	B			

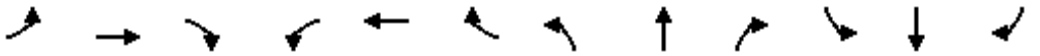
Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	38.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	50	5	5	30	5	160	50	305	45	155	355	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	53	5	5	32	5	170	53	324	48	165	378	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											390	
pX, platoon unblocked												
vC, conflicting volume	1162	1199	202	981	1189	186	404			372		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1162	1199	202	981	1189	186	404			372		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.1			4.4		
tC, 2 stage (s)												
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	44	96	99	81	96	79	95			85		
cM capacity (veh/h)	95	144	790	166	149	818	1158			1108		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	53	11	207	53	216	156	165	252	152
Volume Left	53	0	32	53	0	0	165	0	0
Volume Right	0	5	170	0	0	48	0	0	27
cSH	95	243	476	1158	1700	1700	1108	1700	1700
Volume to Capacity	0.56	0.04	0.44	0.05	0.13	0.09	0.15	0.15	0.09
Queue Length 95th (ft)	64	3	54	4	0	0	13	0	0
Control Delay (s)	82.8	20.5	18.3	8.3	0.0	0.0	8.8	0.0	0.0
Lane LOS	F	C	C	A			A		
Approach Delay (s)	72.4		18.3	1.0			2.6		
Approach LOS	F		C						

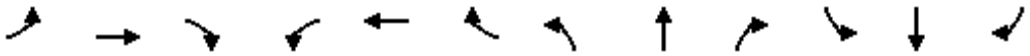
Intersection Summary				
Average Delay	8.1			
Intersection Capacity Utilization	46.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	75	0	50	155	185	0	0	290	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1787	1599	1787	3574			3574	1599
Flt Permitted					0.95	1.00	0.48	1.00			1.00	1.00
Satd. Flow (perm)					1787	1599	901	3574			3574	1599
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	0	0	0	89	0	60	185	220	0	0	345	77
RTOR Reduction (vph)	0	0	0	0	0	42	0	0	0	0	0	53
Lane Group Flow (vph)	0	0	0	0	89	18	185	220	0	0	345	24
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type				Perm		Perm	D.P+P					Perm
Protected Phases					1		4 12	2 4 12			2	
Permitted Phases				1		1	2					2
Actuated Green, G (s)					25.0	25.0	46.5	53.0			25.5	25.5
Effective Green, g (s)					27.0	27.0	44.5	55.0			28.0	28.0
Actuated g/C Ratio					0.30	0.30	0.49	0.61			0.31	0.31
Clearance Time (s)					6.0	6.0					6.5	6.5
Vehicle Extension (s)					3.0	3.0					3.0	3.0
Lane Grp Cap (vph)					536	480	642	2184			1112	497
v/s Ratio Prot							c0.06	c0.06			c0.10	
v/s Ratio Perm					0.05	0.01	0.08					0.01
v/c Ratio					0.17	0.04	0.29	0.10			0.31	0.05
Uniform Delay, d1					23.2	22.3	15.9	7.3			23.6	21.7
Progression Factor					1.00	1.00	1.09	2.75			1.00	1.00
Incremental Delay, d2					0.7	0.1	0.2	0.0			0.7	0.2
Delay (s)					23.9	22.4	17.7	20.0			24.4	21.9
Level of Service					C	C	B	B			C	C
Approach Delay (s)		0.0			23.3			18.9			23.9	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

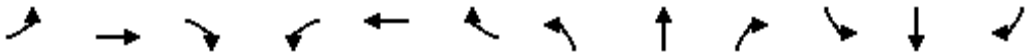
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	215	5	385	0	0	0	0	125	165	45	320	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00					0.95	1.00	1.00	0.95	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1759	1568					3438	1538	1752	3505	
Flt Permitted		0.95	1.00					1.00	1.00	0.67	1.00	
Satd. Flow (perm)		1759	1568					3438	1538	1230	3505	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	231	5	414	0	0	0	0	134	177	48	344	0
RTOR Reduction (vph)	0	0	290	0	0	0	0	0	130	0	0	0
Lane Group Flow (vph)	0	236	124	0	0	0	0	134	47	48	344	0
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Perm		Perm						Perm	D.P+P		
Protected Phases		6						16		5 8	5 8 16	
Permitted Phases	6		6						16	16		
Actuated Green, G (s)		25.0	25.0					21.5	21.5	43.5	56.0	
Effective Green, g (s)		27.0	27.0					24.0	24.0	40.5	40.5	
Actuated g/C Ratio		0.30	0.30					0.27	0.27	0.45	0.45	
Clearance Time (s)		6.0	6.0					6.5	6.5			
Vehicle Extension (s)		3.0	3.0					3.0	3.0			
Lane Grp Cap (vph)		528	470					917	410	670	1577	
v/s Ratio Prot								0.04		0.02	c0.10	
v/s Ratio Perm		0.13	0.08						0.03	0.02		
v/c Ratio		0.45	0.26					0.15	0.12	0.07	0.22	
Uniform Delay, d1		25.5	23.9					25.2	25.0	14.0	15.1	
Progression Factor		1.00	1.00					1.00	1.00	0.02	0.08	
Incremental Delay, d2		2.7	1.4					0.3	0.6	0.2	0.3	
Delay (s)		28.2	25.3					25.5	25.5	0.5	1.6	
Level of Service		C	C					C	C	A	A	
Approach Delay (s)		26.4			0.0			25.5			1.4	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

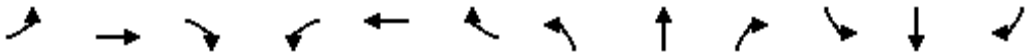
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	20	55	70	10	15	20	175	40	15	225	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	11	22	59	75	11	16	22	188	43	16	242	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								844				
pX, platoon unblocked												
vC, conflicting volume	438	554	247	602	538	116	253			231		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	438	554	247	602	538	116	253			231		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	95	92	77	98	98	98			99		
cM capacity (veh/h)	476	429	756	334	438	918	1317			1334		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1
Volume Total	91	102	116	137	269
Volume Left	11	75	22	0	16
Volume Right	59	16	0	43	11
cSH	605	382	1317	1700	1334
Volume to Capacity	0.15	0.27	0.02	0.08	0.01
Queue Length 95th (ft)	13	27	1	0	1
Control Delay (s)	12.0	17.8	1.6	0.0	0.6
Lane LOS	B	C	A		A
Approach Delay (s)	12.0	17.8	0.7		0.6
Approach LOS	B	C			

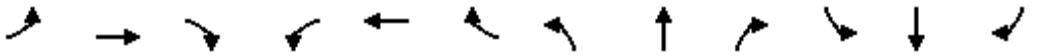
Intersection Summary				
Average Delay	4.5			
Intersection Capacity Utilization	42.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	0	35	25	0	105	5	170	45	65	620	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	20	0	46	33	0	138	7	224	59	86	816	33
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)											390	
pX, platoon unblocked	0.96	0.96	0.96	0.96	0.96		0.96					
vC, conflicting volume	1266	1299	424	891	1286	141	849			283		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1191	1226	313	800	1212	141	755			283		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.1			4.3		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	82	100	93	86	100	84	99			93		
cM capacity (veh/h)	107	155	652	228	157	874	816			1207		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	20	46	171	7	149	134	86	544	305
Volume Left	20	0	33	7	0	0	86	0	0
Volume Right	0	46	138	0	0	59	0	0	33
cSH	107	652	566	816	1700	1700	1207	1700	1700
Volume to Capacity	0.18	0.07	0.30	0.01	0.09	0.08	0.07	0.32	0.18
Queue Length 95th (ft)	16	6	32	1	0	0	6	0	0
Control Delay (s)	45.9	10.9	14.1	9.5	0.0	0.0	8.2	0.0	0.0
Lane LOS	E	B	B	A			A		
Approach Delay (s)	21.4		14.1	0.2			0.8		
Approach LOS	C		B						

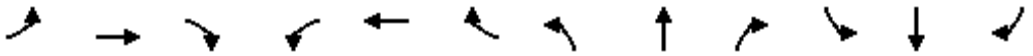
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	45.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	142	0	170	223	275	0	0	266	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					2.0	2.0	7.0	3.5			1.5	1.5
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1787	1599	1787	3574			3505	1568
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1787	1599	1787	3574			3505	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	160	0	191	251	309	0	0	299	92
RTOR Reduction (vph)	0	0	0	0	0	141	0	0	0	0	0	64
Lane Group Flow (vph)	0	0	0	0	160	50	251	309	0	0	299	28
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					5 6		1 2	1 2 3 4			3 4	
Permitted Phases				5 6		5 6						3 4
Actuated Green, G (s)					21.4	21.4	27.6	58.6			24.5	24.5
Effective Green, g (s)					23.4	23.4	26.6	55.6			27.0	27.0
Actuated g/C Ratio					0.26	0.26	0.30	0.62			0.30	0.30
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)					465	416	528	2208			1052	470
v/s Ratio Prot							c0.14	0.09			c0.09	
v/s Ratio Perm					0.09	0.03						0.02
v/c Ratio					0.34	0.12	0.48	0.14			0.28	0.06
Uniform Delay, d1					27.1	25.4	26.0	7.2			24.1	22.4
Progression Factor					1.00	1.00	0.41	0.30			0.78	0.41
Incremental Delay, d2					0.4	0.1	3.0	0.0			0.1	0.0
Delay (s)					27.5	25.6	13.5	2.2			18.9	9.2
Level of Service					C	C	B	A			B	A
Approach Delay (s)		0.0			26.4			7.3			16.7	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

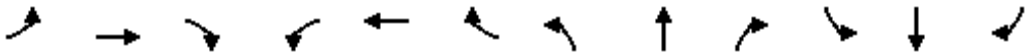
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	0	309	0	0	0	0	348	300	103	460	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5					3.5	3.5	6.0	7.0	
Lane Util. Factor		1.00	1.00					0.95	1.00	1.00	0.95	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1736	1553					3471	1553	1736	3471	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1736	1553					3471	1553	1736	3471	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	157	0	336	0	0	0	0	378	326	112	500	0
RTOR Reduction (vph)	0	0	217	0	0	0	0	0	231	0	0	0
Lane Group Flow (vph)	0	157	119	0	0	0	0	378	95	112	500	0
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		2 3						1 6		4 5	1 4 5 6	
Permitted Phases	2 3		2 3						1 6			
Actuated Green, G (s)		29.3	29.3					26.2	26.2	20.5	50.7	
Effective Green, g (s)		31.3	31.3					26.2	26.2	19.5	32.7	
Actuated g/C Ratio		0.35	0.35					0.29	0.29	0.22	0.36	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		604	540					1010	452	376	1261	
v/s Ratio Prot								c0.11		c0.06	0.14	
v/s Ratio Perm		0.09	0.08						0.06			
v/c Ratio		0.26	0.22					0.37	0.21	0.30	0.40	
Uniform Delay, d1		21.0	20.7					25.4	24.1	29.5	21.3	
Progression Factor		1.00	1.00					1.00	1.00	0.58	0.42	
Incremental Delay, d2		0.2	0.2					0.2	0.2	0.4	0.2	
Delay (s)		21.3	20.9					25.6	24.3	17.6	9.2	
Level of Service		C	C					C	C	B	A	
Approach Delay (s)		21.1			0.0			25.0			10.8	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

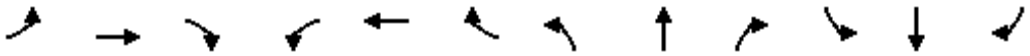
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	360	57	77	107	185	75	245	102	64	245	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.5			6.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.93			0.96			0.99	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1827			1735			3381			3508	
Flt Permitted		0.99			0.67			0.82			0.79	
Satd. Flow (perm)		1815			1176			2788			2812	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	7	371	59	79	110	191	77	253	105	66	253	20
RTOR Reduction (vph)	0	7	0	0	43	0	0	31	0	0	5	0
Lane Group Flow (vph)	0	430	0	0	337	0	0	404	0	0	334	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		28.4			28.4			49.1			49.1	
Effective Green, g (s)		28.4			28.4			49.1			49.1	
Actuated g/C Ratio		0.32			0.32			0.55			0.55	
Clearance Time (s)		6.0			6.0			6.5			6.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		573			371			1521			1534	
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.29			c0.14			0.12	
v/c Ratio		0.75			0.91			0.27			0.22	
Uniform Delay, d1		27.6			29.5			10.9			10.5	
Progression Factor		1.00			1.00			0.67			1.00	
Incremental Delay, d2		5.5			25.1			0.4			0.3	
Delay (s)		33.1			54.6			7.7			10.9	
Level of Service		C			D			A			B	
Approach Delay (s)		33.1			54.6			7.7			10.9	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM Average Control Delay	26.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

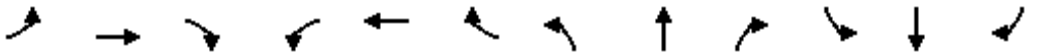
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	5	8	36	9	186	58	357	52	215	442	91
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	63	5	9	38	10	198	62	380	55	229	470	97
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)											390	
pX, platoon unblocked	0.93	0.93	0.93	0.93	0.93		0.93					
vC, conflicting volume	1492	1535	284	1235	1555	218	567			435		
vC1, stage 1 conf vol	976	976		531	531							
vC2, stage 2 conf vol	516	559		704	1024							
vCu, unblocked vol	1386	1431	92	1110	1454	218	396			435		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.1			4.4		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	41	97	99	85	95	75	94			78		
cM capacity (veh/h)	107	194	870	255	188	781	1090			1047		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	63	14	246	62	253	182	229	313	254
Volume Left	63	0	38	62	0	0	229	0	0
Volume Right	0	9	198	0	0	55	0	0	97
cSH	107	371	540	1090	1700	1700	1047	1700	1700
Volume to Capacity	0.59	0.04	0.45	0.06	0.15	0.11	0.22	0.18	0.15
Queue Length 95th (ft)	70	3	59	4	0	0	21	0	0
Control Delay (s)	78.0	15.1	17.1	8.5	0.0	0.0	9.4	0.0	0.0
Lane LOS	F	C	C	A			A		
Approach Delay (s)	66.6		17.1	1.1			2.7		
Approach LOS	F		C						

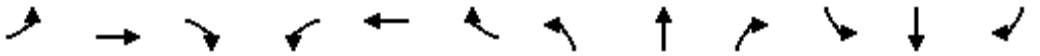
Intersection Summary				
Average Delay	7.4			
Intersection Capacity Utilization	54.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	115	0	132	159	343	0	0	479	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					2.0	2.0	7.0	3.5			1.5	1.5
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1787	1599	1787	3574			3574	1599
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1787	1599	1787	3574			3574	1599
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	0	0	0	137	0	157	189	408	0	0	570	227
RTOR Reduction (vph)	0	0	0	0	0	118	0	0	0	0	0	116
Lane Group Flow (vph)	0	0	0	0	137	39	189	408	0	0	570	111
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					5 6		1 2	1 2 3 4			3 4	
Permitted Phases				5 6		5 6						3 4
Actuated Green, G (s)					21.5	21.5	33.0	63.5			24.0	24.0
Effective Green, g (s)					23.5	23.5	32.0	60.5			26.5	26.5
Actuated g/C Ratio					0.25	0.25	0.34	0.64			0.28	0.28
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)					442	396	602	2276			997	446
v/s Ratio Prot							c0.11	0.11			c0.16	
v/s Ratio Perm					0.08	0.02						0.07
v/c Ratio					0.31	0.10	0.31	0.18			0.57	0.25
Uniform Delay, d1					29.1	27.6	23.4	7.1			29.4	26.5
Progression Factor					1.00	1.00	0.62	0.20			0.91	0.75
Incremental Delay, d2					0.4	0.1	1.3	0.0			0.7	0.3
Delay (s)					29.5	27.7	15.8	1.4			27.5	20.2
Level of Service					C	C	B	A			C	C
Approach Delay (s)		0.0			28.6			6.0			25.4	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

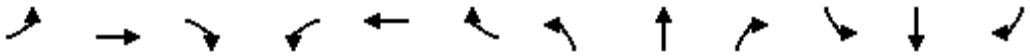
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	0	444	0	0	0	0	223	356	82	467	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5					3.5	3.5	6.0	7.0	
Lane Util. Factor		1.00	1.00					0.95	1.00	1.00	0.95	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1752	1568					3438	1538	1752	3505	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1752	1568					3438	1538	1752	3505	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	314	0	477	0	0	0	0	240	383	88	502	0
RTOR Reduction (vph)	0	0	205	0	0	0	0	0	270	0	0	0
Lane Group Flow (vph)	0	314	272	0	0	0	0	240	113	88	502	0
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Split		Perm						Perm	Prot		
Protected Phases	2 3	2 3						1 6		4 5	1 4 5 6	
Permitted Phases			2 3						1 6			
Actuated Green, G (s)		33.0	33.0					28.0	28.0	20.0	52.0	
Effective Green, g (s)		35.0	35.0					28.0	28.0	19.0	34.0	
Actuated g/C Ratio		0.37	0.37					0.29	0.29	0.20	0.36	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		645	578					1013	453	350	1254	
v/s Ratio Prot		c0.18						0.07		0.05	c0.14	
v/s Ratio Perm			0.17						0.07			
v/c Ratio		0.49	0.47					0.24	0.25	0.25	0.40	
Uniform Delay, d1		23.1	22.9					25.4	25.5	32.0	22.9	
Progression Factor		1.00	1.00					1.00	1.00	0.20	0.22	
Incremental Delay, d2		0.6	0.6					0.1	0.3	0.3	0.2	
Delay (s)		23.7	23.5					25.5	25.8	6.6	5.2	
Level of Service		C	C					C	C	A	A	
Approach Delay (s)		23.6			0.0			25.7			5.4	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM Average Control Delay	18.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	32.5
Intersection Capacity Utilization	57.0%	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												
Volume (vph)	28	112	102	137	60	78	39	249	130	129	391	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.5			6.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.94			0.96			0.95			1.00	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1764			1765			3392			3487	
Flt Permitted		0.94			0.62			0.86			0.72	
Satd. Flow (perm)		1663			1120			2919			2544	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	30	120	110	147	65	84	42	268	140	139	420	10
RTOR Reduction (vph)	0	31	0	0	16	0	0	48	0	0	1	0
Lane Group Flow (vph)	0	229	0	0	280	0	0	402	0	0	568	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		27.1			27.1			55.4			55.4	
Effective Green, g (s)		27.1			27.1			55.4			55.4	
Actuated g/C Ratio		0.29			0.29			0.58			0.58	
Clearance Time (s)		6.0			6.0			6.5			6.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		474			319			1702			1484	
v/s Ratio Prot												
v/s Ratio Perm		0.14			c0.25			0.14			c0.22	
v/c Ratio		0.48			0.88			0.24			0.38	
Uniform Delay, d1		28.1			32.4			9.6			10.6	
Progression Factor		1.00			1.00			0.49			1.00	
Incremental Delay, d2		0.8			22.5			0.3			0.7	
Delay (s)		28.9			54.9			5.0			11.4	
Level of Service		C			D			A			B	
Approach Delay (s)		28.9			54.9			5.0			11.4	
Approach LOS		C			D			A			B	

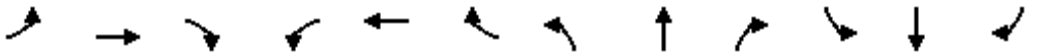
Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	1	41	30	2	118	6	291	45	74	628	103
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	76	1	54	39	3	155	8	383	59	97	826	136
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)											390	
pX, platoon unblocked	0.90	0.90	0.90	0.90	0.90		0.90					
vC, conflicting volume	1453	1547	481	1091	1585	221	962			442		
vC1, stage 1 conf vol	1089	1089		428	428							
vC2, stage 2 conf vol	364	458		662	1157							
vCu, unblocked vol	1285	1390	209	885	1432	221	742			442		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.1			4.3		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	65	99	92	89	99	80	99			91		
cM capacity (veh/h)	218	261	717	371	244	777	777			1047		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	76	55	197	8	255	187	97	551	411
Volume Left	76	0	39	8	0	0	97	0	0
Volume Right	0	54	155	0	0	59	0	0	136
cSH	218	688	623	777	1700	1700	1047	1700	1700
Volume to Capacity	0.35	0.08	0.32	0.01	0.15	0.11	0.09	0.32	0.24
Queue Length 95th (ft)	37	7	34	1	0	0	8	0	0
Control Delay (s)	30.2	10.7	13.4	9.7	0.0	0.0	8.8	0.0	0.0
Lane LOS	D	B	B	A			A		
Approach Delay (s)	22.0		13.4	0.2			0.8		
Approach LOS	C		B						

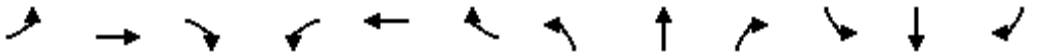
Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	49.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	142	0	170	223	275	0	0	266	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					2.0	2.0	7.0	3.5			1.5	1.5
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1787	1599	1787	3574			3505	1568
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1787	1599	1787	3574			3505	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	160	0	191	251	309	0	0	299	92
RTOR Reduction (vph)	0	0	0	0	0	141	0	0	0	0	0	64
Lane Group Flow (vph)	0	0	0	0	160	50	251	309	0	0	299	28
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					5 6		1 2	1 2 3 4			3 4	
Permitted Phases				5 6		5 6						3 4
Actuated Green, G (s)					21.4	21.4	27.6	58.6			24.5	24.5
Effective Green, g (s)					23.4	23.4	26.6	55.6			27.0	27.0
Actuated g/C Ratio					0.26	0.26	0.30	0.62			0.30	0.30
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)					465	416	528	2208			1052	470
v/s Ratio Prot							c0.14	0.09			c0.09	
v/s Ratio Perm					0.09	0.03						0.02
v/c Ratio					0.34	0.12	0.48	0.14			0.28	0.06
Uniform Delay, d1					27.1	25.4	26.0	7.2			24.1	22.4
Progression Factor					1.00	1.00	0.42	0.30			0.80	0.46
Incremental Delay, d2					0.4	0.1	3.0	0.0			0.1	0.0
Delay (s)					27.5	25.6	14.0	2.2			19.4	10.3
Level of Service					C	C	B	A			B	B
Approach Delay (s)		0.0			26.4			7.5			17.3	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

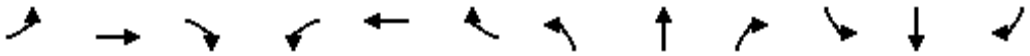
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	0	309	0	0	0	0	348	300	103	460	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5					3.5	3.5	6.0	7.0	
Lane Util. Factor		1.00	1.00					0.95	1.00	1.00	0.95	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1736	1553					3471	1553	1736	3471	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1736	1553					3471	1553	1736	3471	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	157	0	336	0	0	0	0	378	326	112	500	0
RTOR Reduction (vph)	0	0	223	0	0	0	0	0	227	0	0	0
Lane Group Flow (vph)	0	157	113	0	0	0	0	378	99	112	500	0
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm						Perm	Prot		
Protected Phases		2 3						1 6		4 5	1 4 5 6	
Permitted Phases	2 3		2 3						1 6			
Actuated Green, G (s)		28.3	28.3					27.2	27.2	20.5	51.7	
Effective Green, g (s)		30.3	30.3					27.2	27.2	19.5	33.7	
Actuated g/C Ratio		0.34	0.34					0.30	0.30	0.22	0.37	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		584	523					1049	469	376	1300	
v/s Ratio Prot								c0.11		c0.06	0.14	
v/s Ratio Perm		0.09	0.07						0.06			
v/c Ratio		0.27	0.22					0.36	0.21	0.30	0.38	
Uniform Delay, d1		21.8	21.4					24.6	23.4	29.5	20.6	
Progression Factor		1.00	1.00					1.00	1.00	0.58	0.43	
Incremental Delay, d2		0.2	0.2					0.2	0.2	0.4	0.2	
Delay (s)		22.0	21.6					24.8	23.6	17.7	9.1	
Level of Service		C	C					C	C	B	A	
Approach Delay (s)		21.7			0.0			24.3			10.7	
Approach LOS		C			A			C			B	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

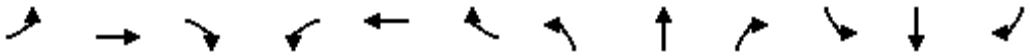
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	360	57	77	107	185	75	245	102	64	245	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.5			6.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.98			0.93			0.96			0.99	
Flt Protected		1.00			0.99			0.99			0.99	
Satd. Flow (prot)		1827			1735			3381			3508	
Flt Permitted		0.99			0.68			0.82			0.79	
Satd. Flow (perm)		1815			1189			2788			2811	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	7	371	59	79	110	191	77	253	105	66	253	20
RTOR Reduction (vph)	0	7	0	0	42	0	0	32	0	0	5	0
Lane Group Flow (vph)	0	430	0	0	338	0	0	403	0	0	334	0
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		28.8			28.8			48.7			48.7	
Effective Green, g (s)		28.8			28.8			48.7			48.7	
Actuated g/C Ratio		0.32			0.32			0.54			0.54	
Clearance Time (s)		6.0			6.0			6.5			6.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		581			380			1509			1521	
v/s Ratio Prot												
v/s Ratio Perm		0.24			c0.28			c0.14			0.12	
v/c Ratio		0.74			0.89			0.27			0.22	
Uniform Delay, d1		27.3			29.1			11.1			10.8	
Progression Factor		1.00			1.00			0.63			1.00	
Incremental Delay, d2		5.0			21.5			0.4			0.3	
Delay (s)		32.3			50.5			7.5			11.1	
Level of Service		C			D			A			B	
Approach Delay (s)		32.3			50.5			7.5			11.1	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

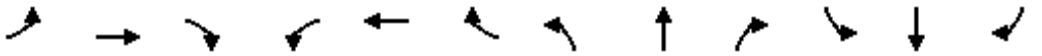
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	5	8	36	9	186	58	357	52	215	442	91
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	63	5	9	38	10	198	62	380	55	229	470	97
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)											390	
pX, platoon unblocked	0.94	0.94	0.94	0.94	0.94		0.94					
vC, conflicting volume	1492	1535	284	1235	1555	218	567			435		
vC1, stage 1 conf vol	976	976		531	531							
vC2, stage 2 conf vol	516	559		704	1024							
vCu, unblocked vol	1389	1435	98	1114	1457	218	401			435		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.1			4.4		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	41	97	99	85	95	75	94			78		
cM capacity (veh/h)	107	193	864	254	187	781	1087			1047		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	63	14	246	62	253	182	229	313	254
Volume Left	63	0	38	62	0	0	229	0	0
Volume Right	0	9	198	0	0	55	0	0	97
cSH	107	370	539	1087	1700	1700	1047	1700	1700
Volume to Capacity	0.59	0.04	0.46	0.06	0.15	0.11	0.22	0.18	0.15
Queue Length 95th (ft)	71	3	59	5	0	0	21	0	0
Control Delay (s)	78.1	15.1	17.1	8.5	0.0	0.0	9.4	0.0	0.0
Lane LOS	F	C	C	A			A		
Approach Delay (s)	66.8		17.1	1.1			2.7		
Approach LOS	F		C						

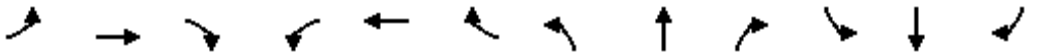
Intersection Summary				
Average Delay	7.4			
Intersection Capacity Utilization	54.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	115	0	132	159	343	0	0	479	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					2.0	2.0	7.0	3.5			1.5	1.5
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1787	1599	1787	3574			3574	1599
Flt Permitted					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					1787	1599	1787	3574			3574	1599
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	0	0	0	137	0	157	189	408	0	0	570	227
RTOR Reduction (vph)	0	0	0	0	0	115	0	0	0	0	0	123
Lane Group Flow (vph)	0	0	0	0	137	42	189	408	0	0	570	104
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type				Perm		Perm	Prot					Perm
Protected Phases					5 6		1 2	1 2 3 4			3 4	
Permitted Phases				5 6		5 6						3 4
Actuated Green, G (s)					22.3	22.3	27.2	57.7			24.0	24.0
Effective Green, g (s)					24.3	24.3	26.2	54.7			26.5	26.5
Actuated g/C Ratio					0.27	0.27	0.29	0.61			0.29	0.29
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)					482	432	520	2172			1052	471
v/s Ratio Prot							c0.11	0.11			c0.16	
v/s Ratio Perm					0.08	0.03						0.07
v/c Ratio					0.28	0.10	0.36	0.19			0.54	0.22
Uniform Delay, d1					26.0	24.6	25.3	7.8			26.7	24.0
Progression Factor					1.00	1.00	0.67	0.18			0.91	0.77
Incremental Delay, d2					0.3	0.1	1.9	0.0			0.5	0.2
Delay (s)					26.3	24.7	18.9	1.5			24.8	18.6
Level of Service					C	C	B	A			C	B
Approach Delay (s)		0.0			25.5			7.0			23.0	
Approach LOS		A			C			A			C	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.5
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

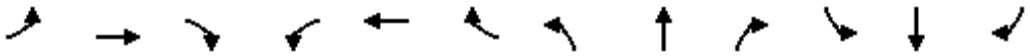
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	0	444	0	0	0	0	223	356	82	467	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5					3.5	3.5	6.0	7.0	
Lane Util. Factor		1.00	1.00					0.95	1.00	1.00	0.95	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1752	1568					3438	1538	1752	3505	
Flt Permitted		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1752	1568					3438	1538	1752	3505	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	314	0	477	0	0	0	0	240	383	88	502	0
RTOR Reduction (vph)	0	0	222	0	0	0	0	0	272	0	0	0
Lane Group Flow (vph)	0	314	255	0	0	0	0	240	111	88	502	0
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Split		Perm						Perm	Prot		
Protected Phases	2 3	2 3						1 6		4 5	1 4 5 6	
Permitted Phases			2 3						1 6			
Actuated Green, G (s)		29.0	29.0					26.2	26.2	20.8	51.0	
Effective Green, g (s)		31.0	31.0					26.2	26.2	19.8	33.0	
Actuated g/C Ratio		0.34	0.34					0.29	0.29	0.22	0.37	
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		603	540					1001	448	385	1285	
v/s Ratio Prot		c0.18						0.07		0.05	c0.14	
v/s Ratio Perm			0.16						0.07			
v/c Ratio		0.52	0.47					0.24	0.25	0.23	0.39	
Uniform Delay, d1		23.6	23.1					24.3	24.4	28.8	21.1	
Progression Factor		1.00	1.00					1.00	1.00	0.18	0.26	
Incremental Delay, d2		0.8	0.7					0.1	0.3	0.3	0.2	
Delay (s)		24.4	23.8					24.4	24.7	5.5	5.6	
Level of Service		C	C					C	C	A	A	
Approach Delay (s)		24.0			0.0			24.6			5.6	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	32.5
Intersection Capacity Utilization	57.0%	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												
Volume (vph)	28	112	102	137	60	78	39	249	130	129	391	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0			6.5			6.5	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.94			0.96			0.95			1.00	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1764			1765			3392			3487	
Flt Permitted		0.94			0.62			0.86			0.72	
Satd. Flow (perm)		1663			1128			2924			2546	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	30	120	110	147	65	84	42	268	140	139	420	10
RTOR Reduction (vph)	0	37	0	0	20	0	0	42	0	0	1	0
Lane Group Flow (vph)	0	223	0	0	276	0	0	408	0	0	568	0
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		25.3			25.3			52.2			52.2	
Effective Green, g (s)		25.3			25.3			52.2			52.2	
Actuated g/C Ratio		0.28			0.28			0.58			0.58	
Clearance Time (s)		6.0			6.0			6.5			6.5	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		467			317			1696			1477	
v/s Ratio Prot												
v/s Ratio Perm		0.13			c0.24			0.14			c0.22	
v/c Ratio		0.48			0.87			0.24			0.38	
Uniform Delay, d1		26.9			30.8			9.2			10.2	
Progression Factor		1.00			1.00			0.47			1.00	
Incremental Delay, d2		0.8			21.9			0.3			0.8	
Delay (s)		27.6			52.7			4.6			11.0	
Level of Service		C			D			A			B	
Approach Delay (s)		27.6			52.7			4.6			11.0	
Approach LOS		C			D			A			B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.5
Intersection Capacity Utilization	77.0%	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												
Volume (veh/h)	58	1	41	30	2	118	6	291	45	74	628	103
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	76	1	54	39	3	155	8	383	59	97	826	136
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)											390	
pX, platoon unblocked	0.90	0.90	0.90	0.90	0.90		0.90					
vC, conflicting volume	1453	1547	481	1091	1585	221	962			442		
vC1, stage 1 conf vol	1089	1089		428	428							
vC2, stage 2 conf vol	364	458		662	1157							
vCu, unblocked vol	1289	1393	215	889	1436	221	747			442		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.1			4.3		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	65	99	92	89	99	80	99			91		
cM capacity (veh/h)	217	260	711	370	243	777	775			1047		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	76	55	197	8	255	187	97	551	411
Volume Left	76	0	39	8	0	0	97	0	0
Volume Right	0	54	155	0	0	59	0	0	136
cSH	217	683	622	775	1700	1700	1047	1700	1700
Volume to Capacity	0.35	0.08	0.32	0.01	0.15	0.11	0.09	0.32	0.24
Queue Length 95th (ft)	38	7	34	1	0	0	8	0	0
Control Delay (s)	30.4	10.7	13.5	9.7	0.0	0.0	8.8	0.0	0.0
Lane LOS	D	B	B	A			A		
Approach Delay (s)	22.1		13.5	0.2			0.8		
Approach LOS	C		B						

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	49.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	359	0	0	219	44	301
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	485	0	0	296	59	407
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			485		781	485
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			485		781	485
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		84	30
cM capacity (veh/h)			1078		365	584

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	485	296	59	407
Volume Left	0	0	59	0
Volume Right	0	0	0	407
cSH	1700	1700	365	584
Volume to Capacity	0.29	0.17	0.16	0.70
Queue Length 95th (ft)	0	0	14	138
Control Delay (s)	0.0	0.0	16.8	24.1
Lane LOS			C	C
Approach Delay (s)	0.0	0.0	23.2	
Approach LOS			C	

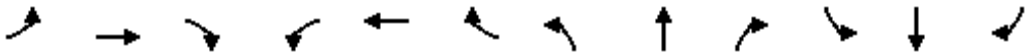
Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	610	0	0	231	22	159
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	678	0	0	257	24	177
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			678		806	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			678		806	339
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		92	73
cM capacity (veh/h)			910		320	657

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	339	339	128	128	201
Volume Left	0	0	0	0	24
Volume Right	0	0	0	0	177
cSH	1700	1700	1700	1700	748
Volume to Capacity	0.20	0.20	0.08	0.08	0.27
Queue Length 95th (ft)	0	0	0	0	27
Control Delay (s)	0.0	0.0	0.0	0.0	13.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.1
Approach LOS					B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	558	104	28	139	347	71	148	14	194	226	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		0.95			0.95	
Frt	1.00	0.98		1.00	1.00	0.85		0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1770	1819		1770	1863	1583		3421			3465	
Flt Permitted	0.58	1.00		0.09	1.00	1.00		0.63			0.69	
Satd. Flow (perm)	1083	1819		166	1863	1583		2205			2425	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	114	715	133	36	178	445	91	190	18	249	290	37
RTOR Reduction (vph)	0	7	0	0	0	235	0	4	0	0	4	0
Lane Group Flow (vph)	114	841	0	36	178	210	0	295	0	0	572	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	Perm			pm+pt		
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	54.7	48.6		49.1	45.8	45.8		34.6			34.6	
Effective Green, g (s)	52.7	50.6		47.1	47.8	47.8		36.6			36.6	
Actuated g/C Ratio	0.52	0.50		0.46	0.47	0.47		0.36			0.36	
Clearance Time (s)	3.0	6.0		3.0	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)	597	907		113	877	745		795			874	
v/s Ratio Prot	c0.01	c0.46		c0.01	0.10							
v/s Ratio Perm	0.09			0.14		0.13		0.13			c0.24	
v/c Ratio	0.19	0.93		0.32	0.20	0.28		0.37			0.65	
Uniform Delay, d1	12.7	23.7		22.4	15.7	16.4		24.0			27.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.2	15.2		1.6	0.1	0.2		1.3			1.8	
Delay (s)	12.8	38.9		24.1	15.8	16.6		25.3			28.9	
Level of Service	B	D		C	B	B		C			C	
Approach Delay (s)		35.8			16.8			25.3			28.9	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	101.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	359	0	0	219	44	301
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	485	0	0	296	59	407
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			485		781	485
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			485		781	485
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		84	30
cM capacity (veh/h)			1078		365	584

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	485	296	59	407
Volume Left	0	0	59	0
Volume Right	0	0	0	407
cSH	1700	1700	365	584
Volume to Capacity	0.29	0.17	0.16	0.70
Queue Length 95th (ft)	0	0	14	138
Control Delay (s)	0.0	0.0	16.8	24.1
Lane LOS			C	C
Approach Delay (s)	0.0	0.0	23.2	
Approach LOS			C	

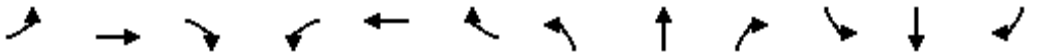
Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	610	0	0	231	22	159
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	678	0	0	257	24	177
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			678		806	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			678		806	339
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		92	73
cM capacity (veh/h)			910		320	657

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	339	339	128	128	201
Volume Left	0	0	0	0	24
Volume Right	0	0	0	0	177
cSH	1700	1700	1700	1700	748
Volume to Capacity	0.20	0.20	0.08	0.08	0.27
Queue Length 95th (ft)	0	0	0	0	27
Control Delay (s)	0.0	0.0	0.0	0.0	13.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.1
Approach LOS					B

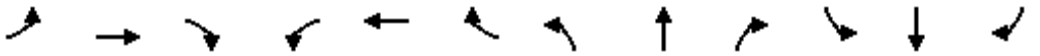
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	558	104	28	139	347	71	148	14	194	226	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	6.0	4.0	4.0	4.0		4.0		4.0	4.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00		0.95		0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	1863	1583		3421		3467	3574	1599
Flt Permitted	0.51	1.00	1.00	0.21	1.00	1.00		0.78		0.49	1.00	1.00
Satd. Flow (perm)	951	3539	1583	389	1863	1583		2693		1794	3574	1599
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	114	715	133	36	178	445	91	190	18	249	290	37
RTOR Reduction (vph)	0	0	96	0	0	321	0	5	0	0	0	19
Lane Group Flow (vph)	114	715	37	36	178	124	0	294	0	249	290	18
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			pm+pt		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	27.8	22.4	22.4	23.6	20.3	20.3		30.5		39.6	39.6	39.6
Effective Green, g (s)	25.8	24.4	22.4	21.6	22.3	22.3		32.5		38.6	41.6	39.6
Actuated g/C Ratio	0.32	0.30	0.28	0.27	0.28	0.28		0.40		0.48	0.52	0.49
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0		6.0		3.0	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	3.0
Lane Grp Cap (vph)	350	1075	442	144	517	440		1090		969	1852	789
v/s Ratio Prot	c0.02	c0.20		0.01	0.10					c0.02	0.08	
v/s Ratio Perm	0.09		0.02	0.06		0.08		c0.11		0.11		0.01
v/c Ratio	0.33	0.67	0.08	0.25	0.34	0.28		0.27		0.26	0.16	0.02
Uniform Delay, d1	19.9	24.4	21.4	22.4	23.2	22.7		16.0		11.8	10.1	10.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	1.6	0.1	0.9	0.4	0.4		0.6		0.1	0.2	0.1
Delay (s)	20.5	26.0	21.5	23.3	23.6	23.1		16.6		12.0	10.3	10.5
Level of Service	C	C	C	C	C	C		B		B	B	B
Approach Delay (s)		24.7			23.2			16.6			11.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		

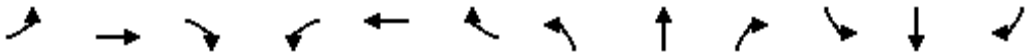
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	142	0	170	223	407	0	0	266	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1787	1599	1787	3574			3505	1568
Flt Permitted					0.95	1.00	0.54	1.00			1.00	1.00
Satd. Flow (perm)					1787	1599	1018	3574			3505	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	160	0	191	251	457	0	0	299	92
RTOR Reduction (vph)	0	0	0	0	0	148	0	0	0	0	0	62
Lane Group Flow (vph)	0	0	0	0	160	43	251	457	0	0	299	30
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	3%	3%	3%
Turn Type				Perm		Perm	D.P+P					Perm
Protected Phases					1		4 12	2 4 12			2	
Permitted Phases				1		1	2					2
Actuated Green, G (s)					16.0	16.0	45.5	52.0			23.9	23.9
Effective Green, g (s)					18.0	18.0	43.5	54.0			26.4	26.4
Actuated g/C Ratio					0.22	0.22	0.54	0.68			0.33	0.33
Clearance Time (s)					6.0	6.0					6.5	6.5
Vehicle Extension (s)					3.0	3.0					3.0	3.0
Lane Grp Cap (vph)					402	360	752	2412			1157	517
v/s Ratio Prot							c0.09	c0.13			0.09	
v/s Ratio Perm					0.09	0.03	c0.10					0.02
v/c Ratio					0.40	0.12	0.33	0.19			0.26	0.06
Uniform Delay, d1					26.4	24.7	11.6	4.8			19.6	18.3
Progression Factor					1.00	1.00	0.80	1.64			1.00	1.00
Incremental Delay, d2					2.9	0.7	0.2	0.0			0.5	0.2
Delay (s)					29.3	25.4	9.5	8.0			20.2	18.5
Level of Service					C	C	A	A			C	B
Approach Delay (s)		0.0			27.2			8.5			19.8	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

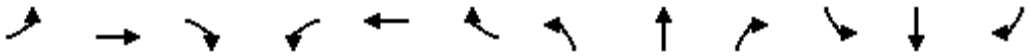
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	0	309	0	0	0	0	439	300	103	460	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00					0.95	1.00	1.00	0.95	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1736	1553					3471	1553	1736	3471	
Flt Permitted		0.95	1.00					1.00	1.00	0.35	1.00	
Satd. Flow (perm)		1736	1553					3471	1553	640	3471	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	222	0	336	0	0	0	0	477	326	112	500	0
RTOR Reduction (vph)	0	0	260	0	0	0	0	0	232	0	0	0
Lane Group Flow (vph)	0	222	76	0	0	0	0	477	94	112	500	0
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	4%	4%	4%	4%	4%	4%
Turn Type	Perm		Perm						Perm	D.P+P		
Protected Phases		6						16		5 8	5 8 16	
Permitted Phases	6		6						16	16		
Actuated Green, G (s)		16.0	16.0					20.5	20.5	42.5	55.0	
Effective Green, g (s)		18.0	18.0					23.0	23.0	39.5	39.5	
Actuated g/C Ratio		0.22	0.22					0.29	0.29	0.49	0.49	
Clearance Time (s)		6.0	6.0					6.5	6.5			
Vehicle Extension (s)		3.0	3.0					3.0	3.0			
Lane Grp Cap (vph)		391	349					998	446	590	1714	
v/s Ratio Prot								c0.14		0.05	c0.14	
v/s Ratio Perm		0.13	0.05						0.06	0.05		
v/c Ratio		0.57	0.22					0.48	0.21	0.19	0.29	
Uniform Delay, d1		27.5	25.3					23.5	21.6	11.2	12.0	
Progression Factor		1.00	1.00					1.00	1.00	0.43	0.25	
Incremental Delay, d2		5.9	1.4					1.6	1.1	0.7	0.4	
Delay (s)		33.4	26.7					25.2	22.7	5.5	3.5	
Level of Service		C	C					C	C	A	A	
Approach Delay (s)		29.4			0.0			24.2			3.8	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

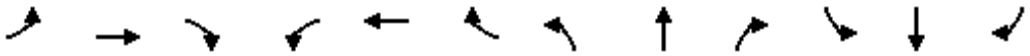
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	360	57	128	107	185	109	340	102	64	354	19
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	7	371	59	132	110	191	112	351	105	66	365	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								844				
pX, platoon unblocked												
vC, conflicting volume	1153	1187	192	1187	1144	228	385			456		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1153	1187	192	1187	1144	228	385			456		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	0	93	0	35	75	90			94		
cM capacity (veh/h)	50	159	817	0	170	778	1171			1109		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	437	433	288	280	248	202
Volume Left	7	132	112	0	66	0
Volume Right	59	191	0	105	0	20
cSH	171	0	1171	1700	1109	1700
Volume to Capacity	2.55	Err	0.10	0.16	0.06	0.12
Queue Length 95th (ft)	940	Err	8	0	5	0
Control Delay (s)	756.9	Err	3.8	0.0	2.7	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	756.9	Err	1.9		1.5	
Approach LOS	F	F				

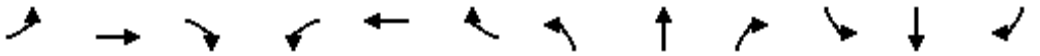
Intersection Summary				
Average Delay	Err			
Intersection Capacity Utilization	88.2%	ICU Level of Service	E	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	5	8	36	9	186	58	357	52	215	442	91
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	63	5	9	38	10	198	62	380	55	229	470	97
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)											390	
pX, platoon unblocked	0.96	0.96	0.96	0.96	0.96		0.96					
vC, conflicting volume	1492	1535	284	1235	1555	218	567			435		
vC1, stage 1 conf vol	976	976		531	531							
vC2, stage 2 conf vol	516	559		704	1024							
vCu, unblocked vol	1433	1477	177	1166	1499	218	472			435		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.1			4.4		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.6	4.1	3.4	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	40	97	99	84	95	75	94			78		
cM capacity (veh/h)	105	189	789	237	179	781	1052			1047		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	63	14	246	62	253	182	229	313	254
Volume Left	63	0	38	62	0	0	229	0	0
Volume Right	0	9	198	0	0	55	0	0	97
cSH	105	356	525	1052	1700	1700	1047	1700	1700
Volume to Capacity	0.60	0.04	0.47	0.06	0.15	0.11	0.22	0.18	0.15
Queue Length 95th (ft)	72	3	62	5	0	0	21	0	0
Control Delay (s)	80.3	15.5	17.8	8.6	0.0	0.0	9.4	0.0	0.0
Lane LOS	F	C	C	A			A		
Approach Delay (s)	68.6		17.8	1.1			2.7		
Approach LOS	F		C						

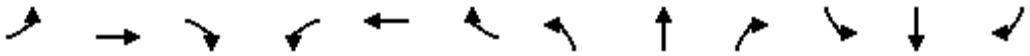
Intersection Summary				
Average Delay	7.6			
Intersection Capacity Utilization	54.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	151	0	132	159	343	0	0	479	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0	4.0	4.0			4.0	4.0
Lane Util. Factor					1.00	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.95	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					1787	1599	1787	3574			3574	1599
Flt Permitted					0.95	1.00	0.28	1.00			1.00	1.00
Satd. Flow (perm)					1787	1599	534	3574			3574	1599
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	0	0	0	180	0	157	189	408	0	0	570	287
RTOR Reduction (vph)	0	0	0	0	0	116	0	0	0	0	0	172
Lane Group Flow (vph)	0	0	0	0	180	41	189	408	0	0	570	115
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Turn Type				Perm		Perm	D.P+P					Perm
Protected Phases					1		4 12	2 4 12			2	
Permitted Phases				1		1	2					2
Actuated Green, G (s)					19.0	19.0	42.5	49.0			21.5	21.5
Effective Green, g (s)					21.0	21.0	40.5	51.0			24.0	24.0
Actuated g/C Ratio					0.26	0.26	0.51	0.64			0.30	0.30
Clearance Time (s)					6.0	6.0					6.5	6.5
Vehicle Extension (s)					3.0	3.0					3.0	3.0
Lane Grp Cap (vph)					469	420	584	2278			1072	480
v/s Ratio Prot							c0.08	c0.11			c0.16	
v/s Ratio Perm					0.10	0.03	0.08					0.07
v/c Ratio					0.38	0.10	0.32	0.18			0.53	0.24
Uniform Delay, d1					24.2	22.3	17.6	5.9			23.3	21.1
Progression Factor					1.00	1.00	0.91	2.64			1.00	1.00
Incremental Delay, d2					2.4	0.5	0.3	0.0			1.9	1.2
Delay (s)					26.6	22.8	16.3	15.7			25.2	22.3
Level of Service					C	C	B	B			C	C
Approach Delay (s)		0.0			24.8			15.9			24.2	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

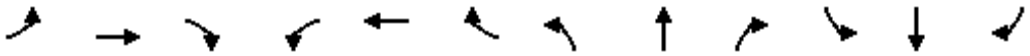
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	292	0	444	0	0	0	0	223	356	82	548	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00					0.95	1.00	1.00	0.95	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1752	1568					3438	1538	1752	3505	
Flt Permitted		0.95	1.00					1.00	1.00	0.59	1.00	
Satd. Flow (perm)		1752	1568					3438	1538	1092	3505	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	314	0	477	0	0	0	0	240	383	88	589	0
RTOR Reduction (vph)	0	0	243	0	0	0	0	0	275	0	0	0
Lane Group Flow (vph)	0	314	234	0	0	0	0	240	108	88	589	0
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Perm		Perm						Perm	D.P+P		
Protected Phases		6						16		5 8	5 8 16	
Permitted Phases	6		6						16	16		
Actuated Green, G (s)		19.0	19.0					20.0	20.0	39.5	52.0	
Effective Green, g (s)		21.0	21.0					22.5	22.5	36.5	36.5	
Actuated g/C Ratio		0.26	0.26					0.28	0.28	0.46	0.46	
Clearance Time (s)		6.0	6.0					6.5	6.5			
Vehicle Extension (s)		3.0	3.0					3.0	3.0			
Lane Grp Cap (vph)		460	412					967	433	643	1599	
v/s Ratio Prot								0.07		0.03	c0.17	
v/s Ratio Perm		0.18	0.15						0.07	0.03		
v/c Ratio		0.68	0.57					0.25	0.25	0.14	0.37	
Uniform Delay, d1		26.5	25.6					22.2	22.2	12.5	14.2	
Progression Factor		1.00	1.00					1.00	1.00	0.24	0.10	
Incremental Delay, d2		8.0	5.6					0.6	1.4	0.4	0.6	
Delay (s)		34.5	31.2					22.8	23.6	3.4	1.9	
Level of Service		C	C					C	C	A	A	
Approach Delay (s)		32.5			0.0			23.3			2.1	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

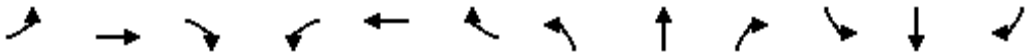
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	28	112	72	137	60	78	39	249	168	129	468	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	30	120	77	147	65	84	42	268	181	139	503	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								844				
pX, platoon unblocked												
vC, conflicting volume	1119	1318	256	1109	1232	224	513			448		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1119	1318	256	1109	1232	224	513			448		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	65	9	90	0	57	89	96			87		
cM capacity (veh/h)	85	132	746	28	149	782	1056			1108		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	228	296	176	315	390	261
Volume Left	30	147	42	0	139	0
Volume Right	77	84	0	181	0	10
cSH	167	51	1056	1700	1108	1700
Volume to Capacity	1.37	5.80	0.04	0.19	0.13	0.15
Queue Length 95th (ft)	346	Err	3	0	11	0
Control Delay (s)	251.4	Err	2.3	0.0	3.9	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	251.4	Err	0.8		2.3	
Approach LOS	F	F				

Intersection Summary				
Average Delay	1810.7			
Intersection Capacity Utilization	71.0%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	58	1	41	30	2	118	6	291	45	74	628	103
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	76	1	54	39	3	155	8	383	59	97	826	136
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								Raised			Raised	
Median storage veh)								2			2	
Upstream signal (ft)											390	
pX, platoon unblocked	0.91	0.91	0.91	0.91	0.91		0.91					
vC, conflicting volume	1453	1547	481	1091	1585	221	962			442		
vC1, stage 1 conf vol	1089	1089		428	428							
vC2, stage 2 conf vol	364	458		662	1157							
vCu, unblocked vol	1293	1397	221	894	1439	221	752			442		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.1			4.3		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.3		
p0 queue free %	65	99	92	89	99	80	99			91		
cM capacity (veh/h)	216	259	707	368	243	777	774			1047		

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	76	55	197	8	255	187	97	551	411
Volume Left	76	0	39	8	0	0	97	0	0
Volume Right	0	54	155	0	0	59	0	0	136
cSH	216	679	621	774	1700	1700	1047	1700	1700
Volume to Capacity	0.35	0.08	0.32	0.01	0.15	0.11	0.09	0.32	0.24
Queue Length 95th (ft)	38	7	34	1	0	0	8	0	0
Control Delay (s)	30.5	10.8	13.5	9.7	0.0	0.0	8.8	0.0	0.0
Lane LOS	D	B	B	A			A		
Approach Delay (s)	22.2		13.5	0.2			0.8		
Approach LOS	C		B						

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	248	0	0	239	85	297
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	310	0	0	299	106	371
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			310		609	310
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			310		609	310
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		77	49
cM capacity (veh/h)			1256		460	732

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	310	299	106	371
Volume Left	0	0	106	0
Volume Right	0	0	0	371
cSH	1700	1700	460	732
Volume to Capacity	0.18	0.18	0.23	0.51
Queue Length 95th (ft)	0	0	22	72
Control Delay (s)	0.0	0.0	15.2	14.9
Lane LOS			C	B
Approach Delay (s)	0.0	0.0	14.9	
Approach LOS			B	

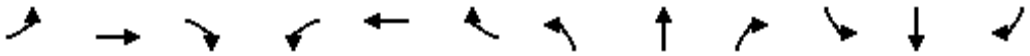
Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	475	0	0	211	17	103
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	511	0	0	227	18	111
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			511		624	255
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			511		624	255
tC, single (s)			4.1		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	85
cM capacity (veh/h)			1058		415	741

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	255	255	113	113	129
Volume Left	0	0	0	0	18
Volume Right	0	0	0	0	111
cSH	1700	1700	1700	1700	863
Volume to Capacity	0.15	0.15	0.07	0.07	0.15
Queue Length 95th (ft)	0	0	0	0	13
Control Delay (s)	0.0	0.0	0.0	0.0	11.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.2
Approach LOS					B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	384	154	44	153	246	33	146	44	168	186	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		0.95			0.95	
Frt	1.00	0.96		1.00	1.00	0.85		0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1787	1801		1752	1845	1568		3443			3446	
Flt Permitted	0.58	1.00		0.14	1.00	1.00		0.85			0.72	
Satd. Flow (perm)	1089	1801		262	1845	1568		2940			2531	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	132	452	181	52	180	289	39	172	52	198	219	47
RTOR Reduction (vph)	0	17	0	0	0	178	0	19	0	0	9	0
Lane Group Flow (vph)	132	616	0	52	180	111	0	244	0	0	455	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	Perm			pm+pt		
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	35.2	30.6		32.4	29.2	29.2		32.7			32.7	
Effective Green, g (s)	33.2	32.6		30.4	31.2	31.2		34.7			34.7	
Actuated g/C Ratio	0.41	0.40		0.37	0.38	0.38		0.43			0.43	
Clearance Time (s)	3.0	6.0		3.0	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)	474	720		138	706	600		1252			1078	
v/s Ratio Prot	c0.01	c0.34		0.01	0.10							
v/s Ratio Perm	0.10			0.13		0.07		0.08			c0.18	
v/c Ratio	0.28	0.86		0.38	0.25	0.18		0.19			0.42	
Uniform Delay, d1	15.6	22.3		19.4	17.2	16.7		14.7			16.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.3	9.8		1.7	0.2	0.1		0.3			0.3	
Delay (s)	16.0	32.1		21.1	17.4	16.9		15.0			16.7	
Level of Service	B	C		C	B	B		B			B	
Approach Delay (s)		29.3			17.5			15.0			16.7	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	21.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	81.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	248	0	0	239	85	297
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	310	0	0	299	106	371
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			310		609	310
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			310		609	310
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		77	49
cM capacity (veh/h)			1256		460	732

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total	310	299	106	371
Volume Left	0	0	106	0
Volume Right	0	0	0	371
cSH	1700	1700	460	732
Volume to Capacity	0.18	0.18	0.23	0.51
Queue Length 95th (ft)	0	0	22	72
Control Delay (s)	0.0	0.0	15.2	14.9
Lane LOS			C	B
Approach Delay (s)	0.0	0.0	14.9	
Approach LOS			B	

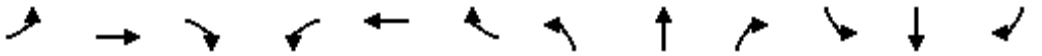
Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	475	0	0	211	17	103
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	511	0	0	227	18	111
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			511		624	255
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			511		624	255
tC, single (s)			4.1		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	85
cM capacity (veh/h)			1058		415	741

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	255	255	113	113	129
Volume Left	0	0	0	0	18
Volume Right	0	0	0	0	111
cSH	1700	1700	1700	1700	863
Volume to Capacity	0.15	0.15	0.07	0.07	0.15
Queue Length 95th (ft)	0	0	0	0	13
Control Delay (s)	0.0	0.0	0.0	0.0	11.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.2
Approach LOS					B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	384	154	44	153	246	33	146	44	168	186	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	6.0	4.0	4.0	4.0		4.0		4.0	4.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00		0.95		0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99		0.95	1.00	1.00
Satd. Flow (prot)	1787	3574	1599	1752	1845	1568		3443		3467	3574	1599
Flt Permitted	0.47	1.00	1.00	0.42	1.00	1.00		0.89		0.51	1.00	1.00
Satd. Flow (perm)	887	3574	1599	767	1845	1568		3079		1867	3574	1599
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	132	452	181	52	180	289	39	172	52	198	219	47
RTOR Reduction (vph)	0	0	140	0	0	223	0	25	0	0	0	23
Lane Group Flow (vph)	132	452	41	52	180	66	0	238	0	198	219	24
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm			pm+pt		Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4		4	8		8	2			6		6
Actuated Green, G (s)	21.7	16.3	16.3	17.7	14.3	14.3		27.3		36.4	36.4	36.4
Effective Green, g (s)	19.7	18.3	16.3	15.7	16.3	16.3		29.3		35.4	38.4	36.4
Actuated g/C Ratio	0.28	0.26	0.23	0.22	0.23	0.23		0.41		0.50	0.54	0.51
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0	6.0		6.0		3.0	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	3.0
Lane Grp Cap (vph)	301	920	367	203	423	359		1269		1044	1930	819
v/s Ratio Prot	c0.03	c0.13		0.01	0.10					c0.01	0.06	
v/s Ratio Perm	0.09		0.03	0.05		0.04		c0.08		0.08		0.02
v/c Ratio	0.44	0.49	0.11	0.26	0.43	0.18		0.19		0.19	0.11	0.03
Uniform Delay, d1	20.2	22.4	21.7	22.3	23.4	22.1		13.3		9.6	8.0	8.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	0.4	0.1	0.7	0.7	0.2		0.3		0.1	0.1	0.1
Delay (s)	21.2	22.9	21.8	22.9	24.1	22.3		13.6		9.7	8.1	8.7
Level of Service	C	C	C	C	C	C		B		A	A	A
Approach Delay (s)		22.3			23.0			13.6			8.9	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	71.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	243	0	0	203	40	260
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	328	0	0	274	54	351
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			328		603	328
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			328		603	328
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		88	51
cM capacity (veh/h)			1231		464	715

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	328	274	405
Volume Left	0	0	54
Volume Right	0	0	351
cSH	1700	1700	825
Volume to Capacity	0.19	0.16	0.49
Queue Length 95th (ft)	0	0	69
Control Delay (s)	0.0	0.0	14.7
Lane LOS			B
Approach Delay (s)	0.0	0.0	14.7
Approach LOS			B

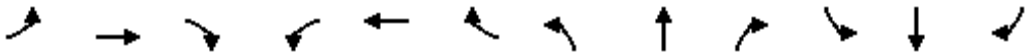
Intersection Summary			
Average Delay	5.9		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	503	0	0	188	15	108
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	559	0	0	209	17	120
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			559		663	279
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			559		663	279
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	83
cM capacity (veh/h)			1008		394	718

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	279	279	104	104	137
Volume Left	0	0	0	0	17
Volume Right	0	0	0	0	120
cSH	1700	1700	1700	1700	817
Volume to Capacity	0.16	0.16	0.06	0.06	0.17
Queue Length 95th (ft)	0	0	0	0	15
Control Delay (s)	0.0	0.0	0.0	0.0	11.4
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.4
Approach LOS					B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	425	113	33	128	158	43	130	28	85	120	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		0.95			0.95	
Frt	1.00	0.97		1.00	1.00	0.85		0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1770	1804		1770	1863	1583		3395			3461	
Flt Permitted	0.61	1.00		0.12	1.00	1.00		0.83			0.75	
Satd. Flow (perm)	1132	1804		220	1863	1583		2857			2638	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	94	545	145	42	164	203	55	167	36	109	154	26
RTOR Reduction (vph)	0	11	0	0	0	117	0	10	0	0	7	0
Lane Group Flow (vph)	94	679	0	42	164	86	0	248	0	0	282	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	Perm			pm+pt		
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	40.9	36.3		38.1	34.9	34.9		32.9			32.9	
Effective Green, g (s)	38.9	38.3		36.1	36.9	36.9		34.9			34.9	
Actuated g/C Ratio	0.45	0.44		0.41	0.42	0.42		0.40			0.40	
Clearance Time (s)	3.0	6.0		3.0	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)	530	791		130	787	668		1141			1053	
v/s Ratio Prot	0.01	c0.38		c0.01	0.09							
v/s Ratio Perm	0.07			0.13		0.05		0.09			c0.11	
v/c Ratio	0.18	0.86		0.32	0.21	0.13		0.22			0.27	
Uniform Delay, d1	14.2	22.1		19.2	16.0	15.4		17.3			17.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.2	9.2		1.4	0.1	0.1		0.4			0.1	
Delay (s)	14.4	31.3		20.7	16.1	15.5		17.7			17.8	
Level of Service	B	C		C	B	B		B			B	
Approach Delay (s)		29.3			16.3			17.7			17.8	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	87.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	215	0	0	190	40	260
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	269	0	0	238	50	325
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			269		506	269
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			269		506	269
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		91	58
cM capacity (veh/h)			1301		528	772

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	269	238	375
Volume Left	0	0	50
Volume Right	0	0	325
cSH	1700	1700	891
Volume to Capacity	0.16	0.14	0.42
Queue Length 95th (ft)	0	0	53
Control Delay (s)	0.0	0.0	12.9
Lane LOS			B
Approach Delay (s)	0.0	0.0	12.9
Approach LOS			B

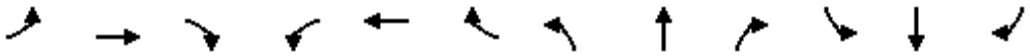
Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	475	0	0	175	15	95
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	511	0	0	188	16	102
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			511		605	255
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			511		605	255
tC, single (s)			4.1		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	86
cM capacity (veh/h)			1058		427	741

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	255	255	94	94	118
Volume Left	0	0	0	0	16
Volume Right	0	0	0	0	102
cSH	1700	1700	1700	1700	858
Volume to Capacity	0.15	0.15	0.06	0.06	0.14
Queue Length 95th (ft)	0	0	0	0	12
Control Delay (s)	0.0	0.0	0.0	0.0	11.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.1
Approach LOS					B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	25.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	365	135	40	135	160	25	120	40	45	130	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		0.95			0.95	
Frt	1.00	0.96		1.00	1.00	0.85		0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.99	
Satd. Flow (prot)	1787	1805		1752	1845	1568		3435			3478	
Flt Permitted	0.59	1.00		0.20	1.00	1.00		0.90			0.85	
Satd. Flow (perm)	1110	1805		373	1845	1568		3113			2995	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	82	429	159	47	159	188	29	141	47	53	153	24
RTOR Reduction (vph)	0	17	0	0	0	129	0	25	0	0	12	0
Lane Group Flow (vph)	82	571	0	47	159	59	0	192	0	0	218	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	Perm			pm+pt		
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.8	22.1		24.2	20.8	20.8		32.1			32.1	
Effective Green, g (s)	24.8	24.1		22.2	22.8	22.8		34.1			34.1	
Actuated g/C Ratio	0.34	0.33		0.31	0.31	0.31		0.47			0.47	
Clearance Time (s)	3.0	6.0		3.0	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)	414	599		160	579	492		1462			1407	
v/s Ratio Prot	c0.01	c0.32		0.01	0.09							
v/s Ratio Perm	0.06			0.08		0.04		0.06			c0.07	
v/c Ratio	0.20	0.95		0.29	0.27	0.12		0.13			0.16	
Uniform Delay, d1	16.5	23.7		19.7	18.7	17.7		10.9			11.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.2	25.4		1.0	0.3	0.1		0.2			0.1	
Delay (s)	16.8	49.1		20.8	19.0	17.9		11.1			11.1	
Level of Service	B	D		C	B	B		B			B	
Approach Delay (s)		45.1			18.6			11.1			11.1	
Approach LOS		D			B			B			B	

Intersection Summary			
HCM Average Control Delay	28.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	359	0	0	219	44	301
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	485	0	0	296	59	407
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			485		781	485
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			485		781	485
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		84	30
cM capacity (veh/h)			1078		365	584

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	485	296	466
Volume Left	0	0	59
Volume Right	0	0	407
cSH	1700	1700	669
Volume to Capacity	0.29	0.17	0.70
Queue Length 95th (ft)	0	0	141
Control Delay (s)	0.0	0.0	23.2
Lane LOS			C
Approach Delay (s)	0.0	0.0	23.2
Approach LOS			C

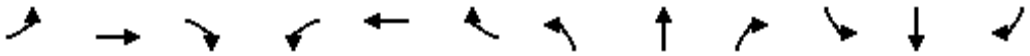
Intersection Summary			
Average Delay	8.7		
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	610	0	0	231	22	159
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	678	0	0	257	24	177
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			678		806	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			678		806	339
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		92	73
cM capacity (veh/h)			910		320	657

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	339	339	128	128	201
Volume Left	0	0	0	0	24
Volume Right	0	0	0	0	177
cSH	1700	1700	1700	1700	748
Volume to Capacity	0.20	0.20	0.08	0.08	0.27
Queue Length 95th (ft)	0	0	0	0	27
Control Delay (s)	0.0	0.0	0.0	0.0	13.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.1
Approach LOS					B

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	558	104	28	139	347	71	148	14	194	226	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		0.95			0.95	
Frt	1.00	0.98		1.00	1.00	0.85		0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1770	1819		1770	1863	1583		3421			3465	
Flt Permitted	0.58	1.00		0.09	1.00	1.00		0.63			0.69	
Satd. Flow (perm)	1083	1819		166	1863	1583		2205			2425	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	114	715	133	36	178	445	91	190	18	249	290	37
RTOR Reduction (vph)	0	7	0	0	0	235	0	4	0	0	4	0
Lane Group Flow (vph)	114	841	0	36	178	210	0	295	0	0	572	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	Perm			pm+pt		
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	54.7	48.6		49.1	45.8	45.8		34.6			34.6	
Effective Green, g (s)	52.7	50.6		47.1	47.8	47.8		36.6			36.6	
Actuated g/C Ratio	0.52	0.50		0.46	0.47	0.47		0.36			0.36	
Clearance Time (s)	3.0	6.0		3.0	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)	597	907		113	877	745		795			874	
v/s Ratio Prot	c0.01	c0.46		c0.01	0.10							
v/s Ratio Perm	0.09			0.14		0.13		0.13			c0.24	
v/c Ratio	0.19	0.93		0.32	0.20	0.28		0.37			0.65	
Uniform Delay, d1	12.7	23.7		22.4	15.7	16.4		24.0			27.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.2	15.2		1.6	0.1	0.2		1.3			1.8	
Delay (s)	12.8	38.9		24.1	15.8	16.6		25.3			28.9	
Level of Service	B	D		C	B	B		C			C	
Approach Delay (s)		35.8			16.8			25.3			28.9	
Approach LOS		D			B			C			C	

Intersection Summary			
HCM Average Control Delay	27.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	101.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	248	0	0	239	85	297
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	310	0	0	299	106	371
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			310		609	310
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			310		609	310
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		77	49
cM capacity (veh/h)			1256		460	732

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	310	299	478
Volume Left	0	0	106
Volume Right	0	0	371
cSH	1700	1700	942
Volume to Capacity	0.18	0.18	0.51
Queue Length 95th (ft)	0	0	73
Control Delay (s)	0.0	0.0	14.9
Lane LOS			B
Approach Delay (s)	0.0	0.0	14.9
Approach LOS			B

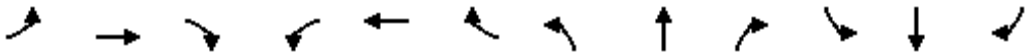
Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	475	0	0	211	17	103
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	511	0	0	227	18	111
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			511		624	255
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			511		624	255
tC, single (s)			4.1		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		96	85
cM capacity (veh/h)			1058		415	741

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	255	255	113	113	129
Volume Left	0	0	0	0	18
Volume Right	0	0	0	0	111
cSH	1700	1700	1700	1700	863
Volume to Capacity	0.15	0.15	0.07	0.07	0.15
Queue Length 95th (ft)	0	0	0	0	13
Control Delay (s)	0.0	0.0	0.0	0.0	11.2
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.2
Approach LOS					B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	26.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	384	154	44	153	246	33	146	44	168	186	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		0.95			0.95	
Frt	1.00	0.96		1.00	1.00	0.85		0.97			0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1787	1801		1752	1845	1568		3443			3446	
Flt Permitted	0.58	1.00		0.14	1.00	1.00		0.85			0.72	
Satd. Flow (perm)	1089	1801		262	1845	1568		2940			2531	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	132	452	181	52	180	289	39	172	52	198	219	47
RTOR Reduction (vph)	0	17	0	0	0	178	0	19	0	0	9	0
Lane Group Flow (vph)	132	616	0	52	180	111	0	244	0	0	455	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	Perm			pm+pt		
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	35.2	30.6		32.4	29.2	29.2		32.7			32.7	
Effective Green, g (s)	33.2	32.6		30.4	31.2	31.2		34.7			34.7	
Actuated g/C Ratio	0.41	0.40		0.37	0.38	0.38		0.43			0.43	
Clearance Time (s)	3.0	6.0		3.0	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)	474	720		138	706	600		1252			1078	
v/s Ratio Prot	c0.01	c0.34		0.01	0.10							
v/s Ratio Perm	0.10			0.13		0.07		0.08			c0.18	
v/c Ratio	0.28	0.86		0.38	0.25	0.18		0.19			0.42	
Uniform Delay, d1	15.6	22.3		19.4	17.2	16.7		14.7			16.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.3	9.8		1.7	0.2	0.1		0.3			0.3	
Delay (s)	16.0	32.1		21.1	17.4	16.9		15.0			16.7	
Level of Service	B	C		C	B	B		B			B	
Approach Delay (s)		29.3			17.5			15.0			16.7	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	21.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	81.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	625	0	0	443	94	340
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	845	0	0	599	127	459
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			845		1443	845
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			845		1443	845
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		13	0
cM capacity (veh/h)			792		146	364

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	845	599	586
Volume Left	0	0	127
Volume Right	0	0	459
cSH	1700	1700	465
Volume to Capacity	0.50	0.35	1.26
Queue Length 95th (ft)	0	0	606
Control Delay (s)	0.0	0.0	154.3
Lane LOS			F
Approach Delay (s)	0.0	0.0	154.3
Approach LOS			F

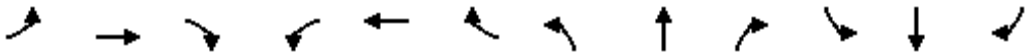
Intersection Summary			
Average Delay	44.6		
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	965	0	0	418	25	179
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	1072	0	0	464	28	199
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			1072		1304	536
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1072		1304	536
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		82	59
cM capacity (veh/h)			646		152	489

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	536	536	232	232	227
Volume Left	0	0	0	0	28
Volume Right	0	0	0	0	199
cSH	1700	1700	1700	1700	557
Volume to Capacity	0.32	0.32	0.14	0.14	0.41
Queue Length 95th (ft)	0	0	0	0	49
Control Delay (s)	0.0	0.0	0.0	0.0	19.4
Lane LOS					C
Approach Delay (s)	0.0		0.0		19.4
Approach LOS					C

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	122	851	155	31	261	578	99	164	16	371	438	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		0.95			0.95	
Frt	1.00	0.98		1.00	1.00	0.85		0.99			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98			0.98	
Satd. Flow (prot)	1770	1820		1770	1863	1583		3413			3457	
Flt Permitted	0.43	1.00		0.06	1.00	1.00		0.53			0.64	
Satd. Flow (perm)	799	1820		106	1863	1583		1850			2275	
Peak-hour factor, PHF	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Adj. Flow (vph)	156	1091	199	40	335	741	127	210	21	476	562	94
RTOR Reduction (vph)	0	4	0	0	0	272	0	3	0	0	4	0
Lane Group Flow (vph)	156	1286	0	40	335	469	0	355	0	0	1128	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	Perm			pm+pt		
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	84.5	76.1		76.6	71.2	71.2		52.0			52.0	
Effective Green, g (s)	83.5	78.1		74.6	73.2	73.2		54.0			54.0	
Actuated g/C Ratio	0.56	0.53		0.50	0.49	0.49		0.36			0.36	
Clearance Time (s)	3.0	6.0		3.0	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)	510	957		103	918	780		673			827	
v/s Ratio Prot	c0.02	c0.71		0.01	0.18							
v/s Ratio Perm	0.15			0.18		0.30		0.19			c0.50	
v/c Ratio	0.31	1.34		0.39	0.36	0.60		2.40dl			1.46dl	
Uniform Delay, d1	16.8	35.2		33.9	23.3	27.1		37.2			47.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.3	161.6		2.4	0.2	1.3		3.0			171.3	
Delay (s)	17.1	196.8		36.3	23.5	28.4		40.2			218.6	
Level of Service	B	F		D	C	C		D			F	
Approach Delay (s)		177.4			27.2			40.2			218.6	
Approach LOS		F			C			D			F	

Intersection Summary			
HCM Average Control Delay	135.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	148.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.1%	ICU Level of Service	G
Analysis Period (min)	15		

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



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	294	0	0	316	95	334
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Hourly flow rate (vph)	368	0	0	395	119	418
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						7
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			368		762	368
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			368		762	368
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		68	39
cM capacity (veh/h)			1197		374	680

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	368	395	536
Volume Left	0	0	119
Volume Right	0	0	418
cSH	1700	1700	874
Volume to Capacity	0.22	0.23	0.61
Queue Length 95th (ft)	0	0	108
Control Delay (s)	0.0	0.0	18.5
Lane LOS			C
Approach Delay (s)	0.0	0.0	18.5
Approach LOS			C

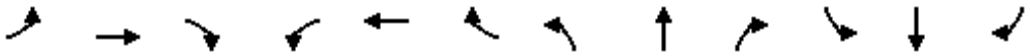
Intersection Summary			
Average Delay	7.6		
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	535	0	0	277	19	117
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	575	0	0	298	20	126
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						10
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				519		
pX, platoon unblocked						
vC, conflicting volume			575		724	288
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			575		724	288
tC, single (s)			4.1		6.9	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	82
cM capacity (veh/h)			1001		358	706

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	288	288	149	149	146
Volume Left	0	0	0	0	20
Volume Right	0	0	0	0	126
cSH	1700	1700	1700	1700	821
Volume to Capacity	0.17	0.17	0.09	0.09	0.18
Queue Length 95th (ft)	0	0	0	0	16
Control Delay (s)	0.0	0.0	0.0	0.0	11.8
Lane LOS					B
Approach Delay (s)	0.0		0.0		11.8
Approach LOS					B

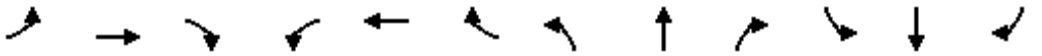
Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	178	433	174	50	213	416	37	216	49	178	356	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00		0.95			0.95	
Frt	1.00	0.96		1.00	1.00	0.85		0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.98	
Satd. Flow (prot)	1787	1800		1752	1845	1568		3465			3479	
Flt Permitted	0.44	1.00		0.14	1.00	1.00		0.82			0.71	
Satd. Flow (perm)	827	1800		257	1845	1568		2852			2502	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	209	509	205	59	251	489	44	254	58	209	419	53
RTOR Reduction (vph)	0	16	0	0	0	310	0	15	0	0	7	0
Lane Group Flow (vph)	209	698	0	59	251	179	0	341	0	0	674	0
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	1%	1%	1%	1%	1%	1%
Turn Type	pm+pt			pm+pt		Perm	Perm			pm+pt		
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	42.2	34.6		34.3	29.7	29.7		32.3			32.3	
Effective Green, g (s)	41.2	36.6		32.3	31.7	31.7		34.3			34.3	
Actuated g/C Ratio	0.48	0.42		0.37	0.37	0.37		0.40			0.40	
Clearance Time (s)	3.0	6.0		3.0	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)	488	762		158	676	575		1131			992	
v/s Ratio Prot	c0.04	c0.39		0.02	0.14							
v/s Ratio Perm	0.16			0.12		0.11		0.12			c0.27	
v/c Ratio	0.43	0.92		0.37	0.37	0.31		0.30			0.68	
Uniform Delay, d1	14.0	23.5		21.0	20.1	19.6		17.9			21.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.6	15.6		1.5	0.3	0.3		0.7			1.9	
Delay (s)	14.6	39.1		22.5	20.4	19.9		18.6			23.4	
Level of Service	B	D		C	C	B		B			C	
Approach Delay (s)		33.5			20.3			18.6			23.4	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	86.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

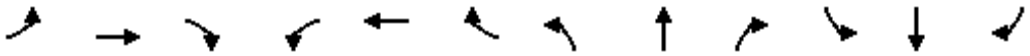
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	185	230	250	1000	0	0	0	0	25	0	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3471	1553	1787	3574						1671	1495
Flt Permitted		1.00	1.00	0.63	1.00						0.95	1.00
Satd. Flow (perm)		3471	1553	1181	3574						1671	1495
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	197	245	266	1064	0	0	0	0	27	0	96
RTOR Reduction (vph)	0	0	193	0	0	0	0	0	0	0	0	81
Lane Group Flow (vph)	0	197	52	266	1064	0	0	0	0	0	27	15
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	1%	1%	1%	8%	8%	8%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		15.5	15.5	48.7	60.7						11.1	11.1
Effective Green, g (s)		17.5	17.5	48.7	48.7						13.1	13.1
Actuated g/C Ratio		0.21	0.21	0.60	0.60						0.16	0.16
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)		743	332	949	2128						268	239
v/s Ratio Prot		0.06		0.11	c0.30							
v/s Ratio Perm			0.03	0.05							0.02	0.01
v/c Ratio		0.27	0.16	0.28	0.50						0.10	0.06
Uniform Delay, d1		26.8	26.2	7.9	9.5						29.3	29.1
Progression Factor		1.00	1.00	0.26	0.02						1.00	1.00
Incremental Delay, d2		0.2	0.2	0.1	0.2						0.8	0.5
Delay (s)		27.0	26.4	2.2	0.4						30.1	29.7
Level of Service		C	C	A	A						C	C
Approach Delay (s)		26.6			0.7			0.0			29.8	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM Average Control Delay	8.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	81.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

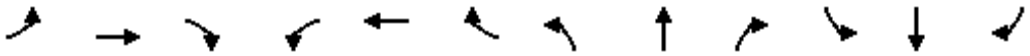
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	190	0	0	760	55	490	5	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1703	3406			3539	1583	1698	1704	1599			
Flt Permitted	0.17	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	303	3406			3539	1583	1698	1704	1599			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	200	0	0	800	58	516	5	126	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	17	0	0	89	0	0	0
Lane Group Flow (vph)	21	200	0	0	800	41	258	263	37	0	0	0
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	41.9	47.9			23.7	23.7	21.9	21.9	21.9			
Effective Green, g (s)	41.9	47.9			25.7	25.7	23.9	23.9	23.9			
Actuated g/C Ratio	0.51	0.59			0.31	0.31	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)	467	1994			1112	497	496	498	467			
v/s Ratio Prot	0.01	c0.06			c0.23							
v/s Ratio Perm	0.01					0.03	0.15	0.15	0.02			
v/c Ratio	0.04	0.10			0.72	0.08	0.52	0.53	0.08			
Uniform Delay, d1	17.7	7.5			24.9	19.7	24.2	24.2	21.0			
Progression Factor	0.32	0.21			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.0	0.0			2.3	0.1	1.0	1.0	0.1			
Delay (s)	5.7	1.6			27.1	19.8	25.2	25.2	21.0			
Level of Service	A	A			C	B	C	C	C			
Approach Delay (s)		2.0			26.6			24.4			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	81.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

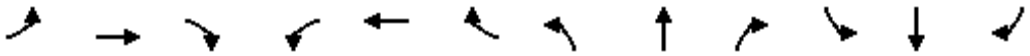
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	195	20	15	655	45	15	20	10	5	10	150
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	120	247	25	19	829	57	19	25	13	6	13	190
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		463										
pX, platoon unblocked												
vC, conflicting volume	886			272			1149	1424	136	1285	1408	443
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	886			272			1149	1424	136	1285	1408	443
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	84			99			77	77	99	93	89	66
cM capacity (veh/h)	766			1295			81	112	888	87	115	565

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	120	165	108	19	553	333	57	209
Volume Left	120	0	0	19	0	0	19	6
Volume Right	0	0	25	0	0	57	13	190
cSH	766	1700	1700	1295	1700	1700	120	403
Volume to Capacity	0.16	0.10	0.06	0.01	0.33	0.20	0.47	0.52
Queue Length 95th (ft)	14	0	0	1	0	0	53	72
Control Delay (s)	10.6	0.0	0.0	7.8	0.0	0.0	59.4	23.1
Lane LOS	B			A			F	C
Approach Delay (s)	3.2			0.2			59.4	23.1
Approach LOS							F	C

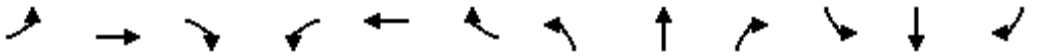
Intersection Summary				
Average Delay	6.2			
Intersection Capacity Utilization	45.0%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	45	385	25	90	870	135	5	5	10	15	0	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	59	507	33	118	1145	178	7	7	13	20	0	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1322			539			1441	2184	253	1770	2039	572
vC1, stage 1 conf vol							625	625		1382	1382	
vC2, stage 2 conf vol							816	1559		388	658	
vCu, unblocked vol	1322			539			1441	2184	253	1770	2039	572
tC, single (s)	4.1			4.1			7.7	6.7	7.1	8.0	7.0	7.4
tC, 2 stage (s)							6.7	5.7		7.0	6.0	
tF (s)	2.2			2.2			3.6	4.1	3.4	3.7	4.2	3.5
p0 queue free %	89			89			97	92	98	81	100	98
cM capacity (veh/h)	518			1032			197	81	728	105	131	414

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	59	253	253	33	118	572	572	178	26	26
Volume Left	59	0	0	0	118	0	0	0	7	20
Volume Right	0	0	0	33	0	0	0	178	13	7
cSH	518	1700	1700	1700	1032	1700	1700	1700	199	129
Volume to Capacity	0.11	0.15	0.15	0.02	0.11	0.34	0.34	0.10	0.13	0.20
Queue Length 95th (ft)	10	0	0	0	10	0	0	0	11	18
Control Delay (s)	12.8	0.0	0.0	0.0	8.9	0.0	0.0	0.0	25.8	39.9
Lane LOS	B				A				D	E
Approach Delay (s)	1.3				0.7				25.8	39.9
Approach LOS									D	E

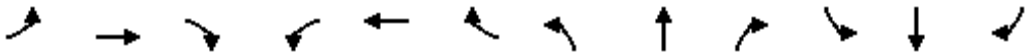
Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	40.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	525	565	210	450	0	0	0	0	50	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3574	1599	1770	3539						1703	1524
Flt Permitted		1.00	1.00	0.34	1.00						0.95	1.00
Satd. Flow (perm)		3574	1599	641	3539						1703	1524
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	541	582	216	464	0	0	0	0	52	0	15
RTOR Reduction (vph)	0	0	392	0	0	0	0	0	0	0	0	12
Lane Group Flow (vph)	0	541	190	216	464	0	0	0	0	0	52	3
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	6%	6%	6%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		21.4	21.4	39.5	51.5						10.1	10.1
Effective Green, g (s)		23.4	23.4	39.5	39.5						12.1	12.1
Actuated g/C Ratio		0.33	0.33	0.55	0.55						0.17	0.17
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)		1168	523	639	1952						288	258
v/s Ratio Prot		c0.15		c0.09	0.13							
v/s Ratio Perm			0.12	0.10							0.03	0.00
v/c Ratio		0.46	0.36	0.34	0.24						0.18	0.01
Uniform Delay, d1		19.1	18.4	8.4	8.3						25.5	24.8
Progression Factor		1.00	1.00	2.14	0.01						1.00	1.00
Incremental Delay, d2		0.3	0.4	0.3	0.1						1.4	0.1
Delay (s)		19.4	18.8	18.3	0.1						26.9	24.8
Level of Service		B	B	B	A						C	C
Approach Delay (s)		19.1			5.9			0.0			26.4	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

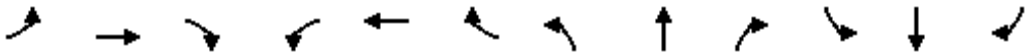
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	510	0	0	395	20	265	0	245	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1787	3574			3539	1583	1665	1665	1568			
Flt Permitted	0.40	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	750	3574			3539	1583	1665	1665	1568			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	537	0	0	416	21	279	0	258	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	11	0	0	201	0	0	0
Lane Group Flow (vph)	68	537	0	0	416	10	139	140	57	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	39.7	45.7			15.9	15.9	13.9	13.9	13.9			
Effective Green, g (s)	39.7	45.7			17.9	17.9	15.9	15.9	15.9			
Actuated g/C Ratio	0.55	0.64			0.25	0.25	0.22	0.22	0.22			
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)	761	2281			885	396	370	370	348			
v/s Ratio Prot	0.03	c0.15			c0.12							
v/s Ratio Perm	0.02					0.01	0.08	0.08	0.04			
v/c Ratio	0.09	0.24			0.47	0.02	0.38	0.38	0.16			
Uniform Delay, d1	9.4	5.5			22.8	20.3	23.6	23.7	22.5			
Progression Factor	0.09	0.20			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.0	0.1			0.4	0.0	0.6	0.6	0.2			
Delay (s)	0.9	1.2			23.2	20.3	24.3	24.3	22.7			
Level of Service	A	A			C	C	C	C	C			
Approach Delay (s)		1.1			23.1			23.5			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	71.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

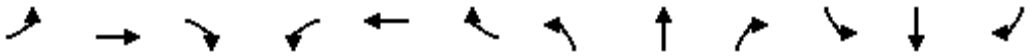
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	165	555	35	20	300	20	15	10	15	15	5	105
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	174	584	37	21	316	21	16	11	16	16	5	111
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		463										
pX, platoon unblocked				0.98			0.98	0.98	0.98	0.98	0.98	
vC, conflicting volume	337			621			1263	1329	311	1029	1337	168
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	337			572			1227	1294	255	988	1302	168
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	86			98			84	92	98	90	96	87
cM capacity (veh/h)	1226			977			98	134	732	161	132	849

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	174	389	232	21	211	126	42	132
Volume Left	174	0	0	21	0	0	16	16
Volume Right	0	0	37	0	0	21	16	111
cSH	1226	1700	1700	977	1700	1700	161	490
Volume to Capacity	0.14	0.23	0.14	0.02	0.12	0.07	0.26	0.27
Queue Length 95th (ft)	12	0	0	2	0	0	25	27
Control Delay (s)	8.4	0.0	0.0	8.8	0.0	0.0	35.0	15.0
Lane LOS	A			A			D	C
Approach Delay (s)	1.8			0.5			35.0	15.0
Approach LOS							D	C

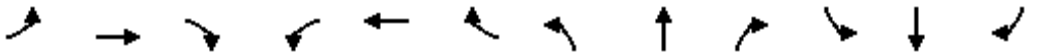
Intersection Summary				
Average Delay	3.8			
Intersection Capacity Utilization	37.8%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	920	30	15	440	15	15	5	80	85	0	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	16	968	32	16	463	16	16	5	84	89	0	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	479			1000			1295	1511	484	1097	1526	232
vC1, stage 1 conf vol							1000	1000		495	495	
vC2, stage 2 conf vol							295	511		603	1032	
vCu, unblocked vol	479			1000			1295	1511	484	1097	1526	232
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			94	98	84	71	100	96
cM capacity (veh/h)	1087			694			244	280	531	308	262	771

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	16	484	484	32	16	232	232	16	105	121
Volume Left	16	0	0	0	16	0	0	0	16	89
Volume Right	0	0	0	32	0	0	0	16	84	32
cSH	1087	1700	1700	1700	694	1700	1700	1700	435	365
Volume to Capacity	0.01	0.28	0.28	0.02	0.02	0.14	0.14	0.01	0.24	0.33
Queue Length 95th (ft)	1	0	0	0	2	0	0	0	23	36
Control Delay (s)	8.4	0.0	0.0	0.0	10.3	0.0	0.0	0.0	15.9	19.7
Lane LOS	A				B				C	C
Approach Delay (s)	0.1				0.3				15.9	19.7
Approach LOS									C	C

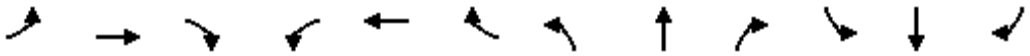
Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	45.3%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	257	332	433	1517	0	0	0	0	108	0	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	6.5	6.5						4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3471	1553	1787	3574						1671	1495
Flt Permitted		1.00	1.00	0.52	1.00						0.95	1.00
Satd. Flow (perm)		3471	1553	984	3574						1671	1495
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	273	353	461	1614	0	0	0	0	115	0	322
RTOR Reduction (vph)	0	0	265	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	273	88	461	1614	0	0	0	0	0	115	290
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	1%	1%	1%	8%	8%	8%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4	3 4						5 6		5 6
Actuated Green, G (s)		25.5	25.5	67.0	73.5						23.5	23.5
Effective Green, g (s)		27.5	27.5	67.0	73.5						25.5	25.5
Actuated g/C Ratio		0.25	0.25	0.61	0.67						0.23	0.23
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		868	388	902	2388						387	347
v/s Ratio Prot		0.08		0.19	c0.45							
v/s Ratio Perm			0.06	0.12							0.07	c0.19
v/c Ratio		0.31	0.23	0.51	0.68						0.30	0.83
Uniform Delay, d1		33.6	32.8	11.4	11.0						34.9	40.2
Progression Factor		1.00	1.00	0.35	0.13						1.00	1.00
Incremental Delay, d2		0.2	0.3	0.0	0.2						2.0	20.6
Delay (s)		33.8	33.1	4.1	1.7						36.8	60.8
Level of Service		C	C	A	A						D	E
Approach Delay (s)		33.4			2.2			0.0			54.5	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

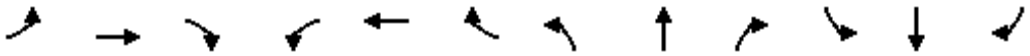
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	335	0	0	1223	154	787	0	395	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1703	3406			3539	1583	1698	1698	2814			
Flt Permitted	0.11	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	196	3406			3539	1583	1698	1698	2814			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	55	353	0	0	1287	162	828	0	416	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	23	0	0	0	0	0	0
Lane Group Flow (vph)	55	353	0	0	1287	139	414	414	416	0	0	0
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases	1 6					1 6	2 3		2 3			
Actuated Green, G (s)	62.0	68.5			36.5	36.5	28.5	28.5	28.5			
Effective Green, g (s)	62.0	70.5			38.5	38.5	30.5	30.5	30.5			
Actuated g/C Ratio	0.56	0.64			0.35	0.35	0.28	0.28	0.28			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	460	2183			1239	554	471	471	780			
v/s Ratio Prot	0.03	c0.10			c0.36							
v/s Ratio Perm	0.04					0.09	c0.24	0.24	0.15			
v/c Ratio	0.12	0.16			1.04	0.25	0.88	0.88	0.53			
Uniform Delay, d1	15.8	7.9			35.8	25.5	38.0	38.0	33.7			
Progression Factor	0.52	0.51			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.0			36.2	0.2	16.8	16.8	0.7			
Delay (s)	8.3	4.1			71.9	25.7	54.8	54.8	34.4			
Level of Service	A	A			E	C	D	D	C			
Approach Delay (s)		4.6			66.8			48.0			0.0	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM Average Control Delay	51.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

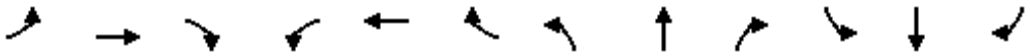
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	343	423	66	51	994	155	21	42	30	49	153	461
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	434	535	84	65	1258	196	27	53	38	62	194	584
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh)		2			2							
Upstream signal (ft)		463										
pX, platoon unblocked												
vC, conflicting volume	1454			619			2884	3029	309	2686	2973	727
vC1, stage 1 conf vol							1446	1446		1485	1485	
vC2, stage 2 conf vol							1439	1584		1201	1487	
vCu, unblocked vol	1454			619			2884	3029	309	2686	2973	727
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)							6.5	5.5		6.5	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	7			93			0	0	94	0	0	0
cM capacity (veh/h)	466			964			0	1	686	0	1	369

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	434	357	262	65	839	616	118	839
Volume Left	434	0	0	65	0	0	27	62
Volume Right	0	0	84	0	0	196	38	584
cSH	466	1700	1700	964	1700	1700	0	0
Volume to Capacity	0.93	0.21	0.15	0.07	0.49	0.36	Err	Err
Queue Length 95th (ft)	273	0	0	5	0	0	Err	Err
Control Delay (s)	56.2	0.0	0.0	9.0	0.0	0.0	Err	Err
Lane LOS	F			A			F	F
Approach Delay (s)	23.2			0.4			Err	Err
Approach LOS							F	F

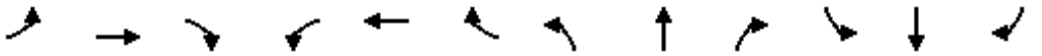
Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	475	33	148	1278	301	8	5	15	18	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	92	625	43	195	1682	396	11	7	20	24	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2078			668			2051	3276	312	2591	2924	841
vC1, stage 1 conf vol							809	809		2071	2071	
vC2, stage 2 conf vol							1242	2467		520	853	
vCu, unblocked vol	2078			668			2051	3276	312	2591	2924	841
tC, single (s)	4.1			4.1			7.7	6.7	7.1	8.0	7.0	7.4
tC, 2 stage (s)							6.7	5.7		7.0	6.0	
tF (s)	2.2			2.2			3.6	4.1	3.4	3.7	4.2	3.5
p0 queue free %	65			79			73	0	97	20	100	96
cM capacity (veh/h)	264			924			39	4	666	30	18	268

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	92	312	312	43	195	841	841	396	37	36
Volume Left	92	0	0	0	195	0	0	0	11	24
Volume Right	0	0	0	43	0	0	0	396	20	12
cSH	264	1700	1700	1700	924	1700	1700	1700	19	42
Volume to Capacity	0.35	0.18	0.18	0.03	0.21	0.49	0.49	0.23	1.93	0.84
Queue Length 95th (ft)	38	0	0	0	20	0	0	0	125	81
Control Delay (s)	25.8	0.0	0.0	0.0	9.9	0.0	0.0	0.0	859.9	238.0
Lane LOS	D				A				F	F
Approach Delay (s)	3.1				0.9				859.9	238.0
Approach LOS									F	F

Intersection Summary			
Average Delay	14.3		
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	824	718	435	594	0	0	0	0	117	0	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	6.5	6.5						4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3574	1599	1770	3539						1703	1524
Flt Permitted		1.00	1.00	0.16	1.00						0.95	1.00
Satd. Flow (perm)		3574	1599	298	3539						1703	1524
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	849	740	448	612	0	0	0	0	121	0	44
RTOR Reduction (vph)	0	0	419	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	849	321	448	612	0	0	0	0	0	121	12
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	6%	6%	6%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4	3 4						5 6		5 6
Actuated Green, G (s)		25.0	25.0	52.5	59.0						23.0	23.0
Effective Green, g (s)		27.0	27.0	52.5	59.0						25.0	25.0
Actuated g/C Ratio		0.28	0.28	0.55	0.62						0.26	0.26
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1016	454	591	2198						448	401
v/s Ratio Prot		c0.24		c0.22	0.17							
v/s Ratio Perm			0.20	0.20							0.07	0.01
v/c Ratio		0.84	0.71	0.76	0.28						0.27	0.03
Uniform Delay, d1		31.9	30.5	20.5	8.2						27.8	26.0
Progression Factor		1.00	1.00	0.34	0.15						1.00	1.00
Incremental Delay, d2		6.1	5.0	2.9	0.1						1.5	0.1
Delay (s)		38.0	35.5	9.9	1.3						29.2	26.1
Level of Service		D	D	A	A						C	C
Approach Delay (s)		36.8			4.9			0.0			28.4	
Approach LOS		D			A			A			C	

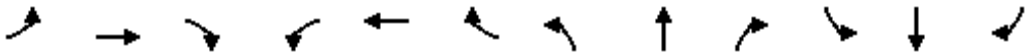
Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	806	0	0	879	52	305	0	615	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1787	3574			3539	1583	1665	1665	2760			
Flt Permitted	0.15	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	284	3574			3539	1583	1665	1665	2760			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	848	0	0	925	55	321	0	647	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	13	0	0	0	0	0	0
Lane Group Flow (vph)	78	848	0	0	925	42	160	161	647	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases	1 6					1 6	2 3		2 3			
Actuated Green, G (s)	51.0	57.5			26.5	26.5	24.5	24.5	24.5			
Effective Green, g (s)	51.0	59.5			28.5	28.5	26.5	26.5	26.5			
Actuated g/C Ratio	0.54	0.63			0.30	0.30	0.28	0.28	0.28			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	540	2238			1062	475	464	464	770			
v/s Ratio Prot	0.04	c0.24			c0.26							
v/s Ratio Perm	0.04					0.03	0.10	0.10	c0.23			
v/c Ratio	0.14	0.38			0.87	0.09	0.34	0.35	0.84			
Uniform Delay, d1	12.9	8.7			31.5	23.9	27.3	27.3	32.3			
Progression Factor	0.18	0.59			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.1			8.0	0.1	0.4	0.5	8.2			
Delay (s)	2.4	5.2			39.5	24.0	27.8	27.8	40.5			
Level of Service	A	A			D	C	C	C	D			
Approach Delay (s)		4.9			38.6			36.3			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

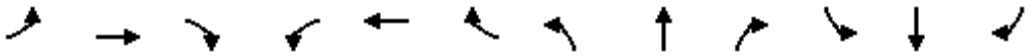
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	642	944	41	32	521	71	39	43	24	30	21	331
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	676	994	43	34	548	75	41	45	25	32	22	348
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		463										
pX, platoon unblocked				0.96			0.96	0.96	0.96	0.96	0.96	
vC, conflicting volume	623			1037			3068	3057	518	2549	3042	312
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			950			3071	3060	409	2530	3043	312
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	30			95			0	0	96	0	0	49
cM capacity (veh/h)	961			688			0	3	570	0	3	687

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	676	662	374	34	366	258	112	402
Volume Left	676	0	0	34	0	0	41	32
Volume Right	0	0	43	0	0	75	25	348
cSH	961	1700	1700	688	1700	1700	0	0
Volume to Capacity	0.70	0.39	0.22	0.05	0.22	0.15	Err	Err
Queue Length 95th (ft)	152	0	0	4	0	0	Err	Err
Control Delay (s)	17.1	0.0	0.0	10.5	0.0	0.0	Err	Err
Lane LOS	C			B			F	F
Approach Delay (s)	6.8			0.5			Err	Err
Approach LOS							F	F

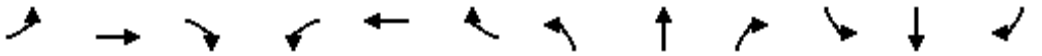
Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	1126	40	16	508	117	16	12	181	150	0	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	45	1185	42	17	535	123	17	13	191	158	0	65
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	658			1227			1642	1967	593	1448	1886	267
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	658			1227			1642	1967	593	1448	1886	267
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			97			71	78	58	0	100	91
cM capacity (veh/h)	933			569			57	58	452	42	64	731

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	45	593	593	42	17	267	267	123	220	223
Volume Left	45	0	0	0	17	0	0	0	17	158
Volume Right	0	0	0	42	0	0	0	123	191	65
cSH	933	1700	1700	1700	569	1700	1700	1700	235	58
Volume to Capacity	0.05	0.35	0.35	0.02	0.03	0.16	0.16	0.07	0.93	3.87
Queue Length 95th (ft)	4	0	0	0	2	0	0	0	204	Err
Control Delay (s)	9.1	0.0	0.0	0.0	11.5	0.0	0.0	0.0	87.2	Err
Lane LOS	A				B				F	F
Approach Delay (s)	0.3				0.3				87.2	Err
Approach LOS									F	F

Intersection Summary				
Average Delay	941.7			
Intersection Capacity Utilization	70.5%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	257	332	433	1517	0	0	0	0	108	0	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	6.5	6.5						4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3471	1553	1787	3574						1671	1495
Flt Permitted		1.00	1.00	0.53	1.00						0.95	1.00
Satd. Flow (perm)		3471	1553	1002	3574						1671	1495
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	273	353	461	1614	0	0	0	0	115	0	322
RTOR Reduction (vph)	0	0	261	0	0	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	273	92	461	1614	0	0	0	0	0	115	292
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	1%	1%	1%	8%	8%	8%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4	3 4						5 6		5 6
Actuated Green, G (s)		25.5	25.5	62.0	68.5						23.5	23.5
Effective Green, g (s)		27.5	27.5	62.0	68.5						25.5	25.5
Actuated g/C Ratio		0.26	0.26	0.59	0.65						0.24	0.24
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		909	407	865	2332						406	363
v/s Ratio Prot		0.08		0.19	c0.45							
v/s Ratio Perm			0.06	0.13							0.07	c0.20
v/c Ratio		0.30	0.23	0.53	0.69						0.28	0.81
Uniform Delay, d1		31.0	30.4	11.9	11.6						32.3	37.4
Progression Factor		1.00	1.00	0.42	0.16						1.00	1.00
Incremental Delay, d2		0.2	0.3	0.1	0.2						1.7	17.2
Delay (s)		31.2	30.7	5.1	2.0						34.1	54.6
Level of Service		C	C	A	A						C	D
Approach Delay (s)		30.9			2.7			0.0			49.2	
Approach LOS		C			A			A			D	

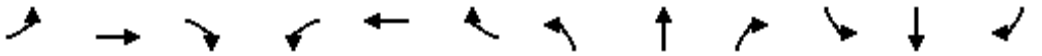
Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	335	0	0	1223	154	787	0	395	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1703	3406			3539	1583	1698	1698	2814			
Flt Permitted	0.12	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	221	3406			3539	1583	1698	1698	2814			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	55	353	0	0	1287	162	828	0	416	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	74	0	0	0	0	0	0
Lane Group Flow (vph)	55	353	0	0	1287	88	414	414	416	0	0	0
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases	1 6					1 6	2 3		2 3			
Actuated Green, G (s)	58.0	64.5			32.5	32.5	27.5	27.5	27.5			
Effective Green, g (s)	58.0	66.5			34.5	34.5	29.5	29.5	29.5			
Actuated g/C Ratio	0.55	0.63			0.33	0.33	0.28	0.28	0.28			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	482	2157			1163	520	477	477	791			
v/s Ratio Prot	0.03	c0.10			c0.36							
v/s Ratio Perm	0.04					0.06	c0.24	0.24	0.15			
v/c Ratio	0.11	0.16			1.11	0.17	0.87	0.87	0.53			
Uniform Delay, d1	14.9	7.9			35.2	25.1	35.9	35.9	31.9			
Progression Factor	0.52	0.51			1.06	1.52	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.0			54.5	0.1	15.3	15.3	0.6			
Delay (s)	7.9	4.0			91.8	38.2	51.2	51.2	32.5			
Level of Service	A	A			F	D	D	D	C			
Approach Delay (s)		4.6			85.8			44.9			0.0	
Approach LOS		A			F			D			A	

Intersection Summary			
HCM Average Control Delay	58.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

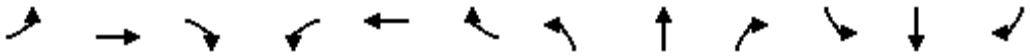
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	343	423	66	51	994	155	21	42	30	49	153	461
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	0.97	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	3467	3502		1787	3502			1762			1859	1599
Flt Permitted	0.95	1.00		0.95	1.00			0.69			0.87	1.00
Satd. Flow (perm)	3467	3502		1787	3502			1233			1640	1599
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	434	535	84	65	1258	196	27	53	38	62	194	584
RTOR Reduction (vph)	0	10	0	0	11	0	0	17	0	0	0	15
Lane Group Flow (vph)	434	609	0	65	1443	0	0	101	0	0	256	569
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	18.4	59.6		7.1	48.3			20.3			20.3	38.7
Effective Green, g (s)	18.4	59.6		7.1	48.3			20.3			20.3	38.7
Actuated g/C Ratio	0.18	0.57		0.07	0.46			0.19			0.19	0.37
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)	608	1988		121	1611			238			317	681
v/s Ratio Prot	0.13	0.17		0.04	c0.41							c0.15
v/s Ratio Perm								0.08			0.16	0.21
v/c Ratio	0.71	0.31		0.54	0.90			0.42			0.81	0.84
Uniform Delay, d1	40.8	11.9		47.4	26.0			37.2			40.5	30.2
Progression Factor	0.85	1.12		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	3.9	0.4		4.5	8.2			1.2			14.0	8.7
Delay (s)	38.6	13.7		51.9	34.2			38.4			54.4	39.0
Level of Service	D	B		D	C			D			D	D
Approach Delay (s)		24.0			34.9			38.4			43.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

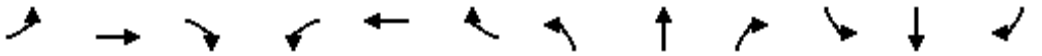
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	475	33	148	1278	301	8	5	15	18	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	92	625	43	195	1682	396	11	7	20	24	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2078			668			2051	3276	312	2591	2924	841
vC1, stage 1 conf vol							809	809		2071	2071	
vC2, stage 2 conf vol							1242	2467		520	853	
vCu, unblocked vol	2078			668			2051	3276	312	2591	2924	841
tC, single (s)	4.1			4.1			7.7	6.7	7.1	8.0	7.0	7.4
tC, 2 stage (s)							6.7	5.7		7.0	6.0	
tF (s)	2.2			2.2			3.6	4.1	3.4	3.7	4.2	3.5
p0 queue free %	65			79			73	0	97	20	100	96
cM capacity (veh/h)	264			924			39	4	666	30	18	268

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	92	312	312	43	195	841	841	396	37	36
Volume Left	92	0	0	0	195	0	0	0	11	24
Volume Right	0	0	0	43	0	0	0	396	20	12
cSH	264	1700	1700	1700	924	1700	1700	1700	19	42
Volume to Capacity	0.35	0.18	0.18	0.03	0.21	0.49	0.49	0.23	1.93	0.84
Queue Length 95th (ft)	38	0	0	0	20	0	0	0	125	81
Control Delay (s)	25.8	0.0	0.0	0.0	9.9	0.0	0.0	0.0	859.9	238.0
Lane LOS	D				A				F	F
Approach Delay (s)	3.1				0.9				859.9	238.0
Approach LOS									F	F

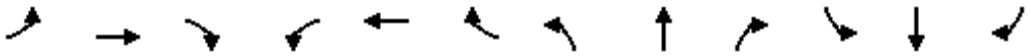
Intersection Summary				
Average Delay	14.3			
Intersection Capacity Utilization	52.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	824	718	435	594	0	0	0	0	117	0	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	6.5	6.5						4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3574	1599	1770	3539						1703	1524
Flt Permitted		1.00	1.00	0.16	1.00						0.95	1.00
Satd. Flow (perm)		3574	1599	298	3539						1703	1524
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	849	740	448	612	0	0	0	0	121	0	44
RTOR Reduction (vph)	0	0	419	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	849	321	448	612	0	0	0	0	0	121	12
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	6%	6%	6%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4	3 4						5 6		5 6
Actuated Green, G (s)		25.0	25.0	52.5	59.0						23.0	23.0
Effective Green, g (s)		27.0	27.0	52.5	59.0						25.0	25.0
Actuated g/C Ratio		0.28	0.28	0.55	0.62						0.26	0.26
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1016	454	591	2198						448	401
v/s Ratio Prot		c0.24		c0.22	0.17							
v/s Ratio Perm			0.20	0.20							0.07	0.01
v/c Ratio		0.84	0.71	0.76	0.28						0.27	0.03
Uniform Delay, d1		31.9	30.5	20.5	8.2						27.8	26.0
Progression Factor		1.00	1.00	0.34	0.15						1.00	1.00
Incremental Delay, d2		6.1	5.0	2.9	0.1						1.5	0.1
Delay (s)		38.0	35.5	9.8	1.3						29.2	26.1
Level of Service		D	D	A	A						C	C
Approach Delay (s)		36.8			4.9			0.0			28.4	
Approach LOS		D			A			A			C	

Intersection Summary					
HCM Average Control Delay	24.3	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.63				
Actuated Cycle Length (s)	95.0	Sum of lost time (s)		15.5	
Intersection Capacity Utilization	88.1%	ICU Level of Service		E	
Analysis Period (min)	15				

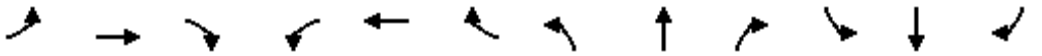
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	806	0	0	879	52	305	0	615	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1787	3574			3539	1583	1665	1665	2760			
Flt Permitted	0.15	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	284	3574			3539	1583	1665	1665	2760			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	848	0	0	925	55	321	0	647	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	39	0	0	0	0	0	0
Lane Group Flow (vph)	78	848	0	0	925	17	160	161	647	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases	1 6					1 6	2 3		2 3			
Actuated Green, G (s)	51.0	57.5			26.5	26.5	24.5	24.5	24.5			
Effective Green, g (s)	51.0	59.5			28.5	28.5	26.5	26.5	26.5			
Actuated g/C Ratio	0.54	0.63			0.30	0.30	0.28	0.28	0.28			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	540	2238			1062	475	464	464	770			
v/s Ratio Prot	0.04	c0.24			c0.26							
v/s Ratio Perm	0.04					0.01	0.10	0.10	c0.23			
v/c Ratio	0.14	0.38			0.87	0.03	0.34	0.35	0.84			
Uniform Delay, d1	12.9	8.7			31.5	23.5	27.3	27.3	32.3			
Progression Factor	0.18	0.59			0.79	0.69	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.1			7.5	0.0	0.4	0.5	8.2			
Delay (s)	2.4	5.2			32.5	16.2	27.8	27.8	40.5			
Level of Service	A	A			C	B	C	C	D			
Approach Delay (s)		4.9			31.6			36.3			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

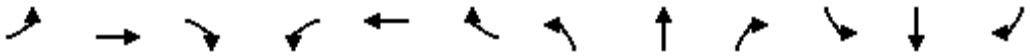
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	642	944	41	32	521	71	39	43	24	30	21	331
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	0.97	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	3467	3552		1770	3475			1791			1827	1599
Flt Permitted	0.95	1.00		0.95	1.00			0.86			0.75	1.00
Satd. Flow (perm)	3467	3552		1770	3475			1561			1419	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	676	994	43	34	548	75	41	45	25	32	22	348
RTOR Reduction (vph)	0	3	0	0	9	0	0	12	0	0	0	61
Lane Group Flow (vph)	676	1034	0	34	614	0	0	99	0	0	54	287
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	25.5	59.7		5.2	39.4			12.1			12.1	37.6
Effective Green, g (s)	25.5	59.7		5.2	39.4			12.1			12.1	37.6
Actuated g/C Ratio	0.27	0.63		0.05	0.41			0.13			0.13	0.40
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)	931	2232		97	1441			199			181	734
v/s Ratio Prot	c0.19	c0.29		0.02	0.18							c0.10
v/s Ratio Perm								0.06			0.04	0.07
v/c Ratio	0.73	0.46		0.35	0.43			0.50			0.30	0.39
Uniform Delay, d1	31.6	9.3		43.3	19.8			38.6			37.6	20.5
Progression Factor	1.17	0.24		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	2.5	0.6		2.2	0.9			1.9			0.9	0.3
Delay (s)	39.6	2.9		45.5	20.7			40.6			38.5	20.9
Level of Service	D	A		D	C			D			D	C
Approach Delay (s)		17.4			22.0			40.6			23.2	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

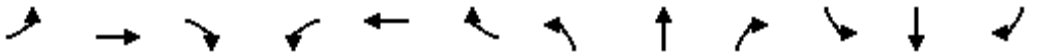
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	1126	40	16	508	117	16	12	181	150	0	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	45	1185	42	17	535	123	17	13	191	158	0	65
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	658			1227			1642	1967	593	1448	1886	267
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	658			1227			1642	1967	593	1448	1886	267
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			97			71	78	58	0	100	91
cM capacity (veh/h)	933			569			57	58	452	42	64	731

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	45	593	593	42	17	267	267	123	220	223
Volume Left	45	0	0	0	17	0	0	0	17	158
Volume Right	0	0	0	42	0	0	0	123	191	65
cSH	933	1700	1700	1700	569	1700	1700	1700	235	58
Volume to Capacity	0.05	0.35	0.35	0.02	0.03	0.16	0.16	0.07	0.93	3.87
Queue Length 95th (ft)	4	0	0	0	2	0	0	0	204	Err
Control Delay (s)	9.1	0.0	0.0	0.0	11.5	0.0	0.0	0.0	87.2	Err
Lane LOS	A				B				F	F
Approach Delay (s)	0.3				0.3				87.2	Err
Approach LOS									F	F

Intersection Summary				
Average Delay	941.7			
Intersection Capacity Utilization	70.5%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	257	332	433	1517	0	0	0	0	108	0	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	6.5	6.5						4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3471	1553	1787	3574						1671	1495
Flt Permitted		1.00	1.00	0.53	1.00						0.95	1.00
Satd. Flow (perm)		3471	1553	1002	3574						1671	1495
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	273	353	461	1614	0	0	0	0	115	0	322
RTOR Reduction (vph)	0	0	261	0	0	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	273	92	461	1614	0	0	0	0	0	115	292
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	1%	1%	1%	8%	8%	8%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4	3 4						5 6		5 6
Actuated Green, G (s)		25.5	25.5	62.0	68.5						23.5	23.5
Effective Green, g (s)		27.5	27.5	62.0	68.5						25.5	25.5
Actuated g/C Ratio		0.26	0.26	0.59	0.65						0.24	0.24
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		909	407	865	2332						406	363
v/s Ratio Prot		0.08		0.19	c0.45							
v/s Ratio Perm			0.06	0.13							0.07	c0.20
v/c Ratio		0.30	0.23	0.53	0.69						0.28	0.81
Uniform Delay, d1		31.0	30.4	11.9	11.6						32.3	37.4
Progression Factor		1.00	1.00	0.42	0.16						1.00	1.00
Incremental Delay, d2		0.2	0.3	0.1	0.2						1.7	17.2
Delay (s)		31.2	30.7	5.1	2.0						34.1	54.6
Level of Service		C	C	A	A						C	D
Approach Delay (s)		30.9			2.7			0.0			49.2	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	76.9%	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												
Volume (vph)	52	335	0	0	1223	154	787	0	395	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1703	3406			3539	1583	1698	1698	2814			
Flt Permitted	0.12	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	221	3406			3539	1583	1698	1698	2814			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	55	353	0	0	1287	162	828	0	416	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	74	0	0	0	0	0	0
Lane Group Flow (vph)	55	353	0	0	1287	88	414	414	416	0	0	0
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases	1 6					1 6	2 3		2 3			
Actuated Green, G (s)	58.0	64.5			32.5	32.5	27.5	27.5	27.5			
Effective Green, g (s)	58.0	66.5			34.5	34.5	29.5	29.5	29.5			
Actuated g/C Ratio	0.55	0.63			0.33	0.33	0.28	0.28	0.28			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	482	2157			1163	520	477	477	791			
v/s Ratio Prot	0.03	c0.10			c0.36							
v/s Ratio Perm	0.04					0.06	c0.24	0.24	0.15			
v/c Ratio	0.11	0.16			1.11	0.17	0.87	0.87	0.53			
Uniform Delay, d1	14.9	7.9			35.2	25.1	35.9	35.9	31.9			
Progression Factor	0.52	0.51			1.06	1.52	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.0			54.5	0.1	15.3	15.3	0.6			
Delay (s)	7.9	4.0			91.8	38.2	51.2	51.2	32.5			
Level of Service	A	A			F	D	D	D	C			
Approach Delay (s)		4.6			85.8			44.9			0.0	
Approach LOS		A			F			D			A	

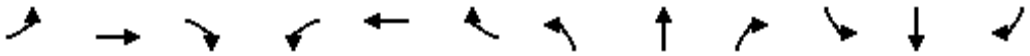
Intersection Summary			
HCM Average Control Delay	58.7	HCM Level of Service	E
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	343	423	66	51	994	155	21	42	30	49	153	461
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	0.97	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	3467	3502		1787	3502			1762			1859	1599
Flt Permitted	0.95	1.00		0.95	1.00			0.69			0.87	1.00
Satd. Flow (perm)	3467	3502		1787	3502			1233			1640	1599
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	434	535	84	65	1258	196	27	53	38	62	194	584
RTOR Reduction (vph)	0	10	0	0	11	0	0	17	0	0	0	15
Lane Group Flow (vph)	434	609	0	65	1443	0	0	101	0	0	256	569
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	18.4	59.6		7.1	48.3			20.3			20.3	38.7
Effective Green, g (s)	18.4	59.6		7.1	48.3			20.3			20.3	38.7
Actuated g/C Ratio	0.18	0.57		0.07	0.46			0.19			0.19	0.37
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)	608	1988		121	1611			238			317	681
v/s Ratio Prot	0.13	0.17		0.04	c0.41							c0.15
v/s Ratio Perm								0.08			0.16	0.21
v/c Ratio	0.71	0.31		0.54	0.90			0.42			0.81	0.84
Uniform Delay, d1	40.8	11.9		47.4	26.0			37.2			40.5	30.2
Progression Factor	0.85	1.12		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	3.9	0.4		4.5	8.2			1.2			14.0	8.7
Delay (s)	38.6	13.7		51.9	34.2			38.4			54.4	39.0
Level of Service	D	B		D	C			D			D	D
Approach Delay (s)		24.0			34.9			38.4			43.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

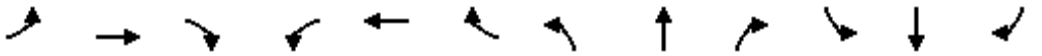
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	475	33	148	1278	301	8	5	15	18	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	92	625	43	195	1682	396	11	7	20	24	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2078			668			2051	3276	312	2591	2924	841
vC1, stage 1 conf vol							809	809		2071	2071	
vC2, stage 2 conf vol							1242	2467		520	853	
vCu, unblocked vol	2078			668			2051	3276	312	2591	2924	841
tC, single (s)	4.1			4.1			7.7	6.7	7.1	8.0	7.0	7.4
tC, 2 stage (s)							6.7	5.7		7.0	6.0	
tF (s)	2.2			2.2			3.6	4.1	3.4	3.7	4.2	3.5
p0 queue free %	65			79			73	0	97	20	100	96
cM capacity (veh/h)	264			924			39	4	666	30	18	268

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	92	312	312	43	195	841	841	396	37	36
Volume Left	92	0	0	0	195	0	0	0	11	24
Volume Right	0	0	0	43	0	0	0	396	20	12
cSH	264	1700	1700	1700	924	1700	1700	1700	19	42
Volume to Capacity	0.35	0.18	0.18	0.03	0.21	0.49	0.49	0.23	1.93	0.84
Queue Length 95th (ft)	38	0	0	0	20	0	0	0	125	81
Control Delay (s)	25.8	0.0	0.0	0.0	9.9	0.0	0.0	0.0	859.9	238.0
Lane LOS	D				A				F	F
Approach Delay (s)	3.1				0.9				859.9	238.0
Approach LOS									F	F

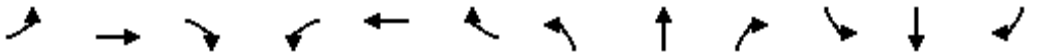
Intersection Summary				
Average Delay	14.3			
Intersection Capacity Utilization	52.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	824	718	435	594	0	0	0	0	117	0	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	6.5	6.5						4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3574	1599	1770	3539						1703	1524
Flt Permitted		1.00	1.00	0.16	1.00						0.95	1.00
Satd. Flow (perm)		3574	1599	298	3539						1703	1524
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	849	740	448	612	0	0	0	0	121	0	44
RTOR Reduction (vph)	0	0	419	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	849	321	448	612	0	0	0	0	0	121	12
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	6%	6%	6%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4	3 4						5 6		5 6
Actuated Green, G (s)		25.0	25.0	52.5	59.0						23.0	23.0
Effective Green, g (s)		27.0	27.0	52.5	59.0						25.0	25.0
Actuated g/C Ratio		0.28	0.28	0.55	0.62						0.26	0.26
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1016	454	591	2198						448	401
v/s Ratio Prot		c0.24		c0.22	0.17							
v/s Ratio Perm			0.20	0.20							0.07	0.01
v/c Ratio		0.84	0.71	0.76	0.28						0.27	0.03
Uniform Delay, d1		31.9	30.5	20.5	8.2						27.8	26.0
Progression Factor		1.00	1.00	0.34	0.15						1.00	1.00
Incremental Delay, d2		6.1	5.0	2.9	0.1						1.5	0.1
Delay (s)		38.0	35.5	9.8	1.3						29.2	26.1
Level of Service		D	D	A	A						C	C
Approach Delay (s)		36.8			4.9			0.0			28.4	
Approach LOS		D			A			A			C	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

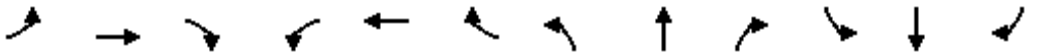
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	806	0	0	879	52	305	0	615	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1787	3574			3539	1583	1665	1665	2760			
Flt Permitted	0.15	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	284	3574			3539	1583	1665	1665	2760			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	848	0	0	925	55	321	0	647	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	39	0	0	0	0	0	0
Lane Group Flow (vph)	78	848	0	0	925	17	160	161	647	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases	1 6					1 6	2 3		2 3			
Actuated Green, G (s)	51.0	57.5			26.5	26.5	24.5	24.5	24.5			
Effective Green, g (s)	51.0	59.5			28.5	28.5	26.5	26.5	26.5			
Actuated g/C Ratio	0.54	0.63			0.30	0.30	0.28	0.28	0.28			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	540	2238			1062	475	464	464	770			
v/s Ratio Prot	0.04	c0.24			c0.26							
v/s Ratio Perm	0.04					0.01	0.10	0.10	c0.23			
v/c Ratio	0.14	0.38			0.87	0.03	0.34	0.35	0.84			
Uniform Delay, d1	12.9	8.7			31.5	23.5	27.3	27.3	32.3			
Progression Factor	0.18	0.59			0.79	0.69	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.1			7.5	0.0	0.4	0.5	8.2			
Delay (s)	2.4	5.2			32.5	16.2	27.8	27.8	40.5			
Level of Service	A	A			C	B	C	C	D			
Approach Delay (s)		4.9			31.6			36.3			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

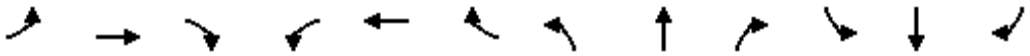
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	642	944	41	32	521	71	39	43	24	30	21	331
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	0.97	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	3467	3552		1770	3475			1791			1827	1599
Flt Permitted	0.95	1.00		0.95	1.00			0.86			0.75	1.00
Satd. Flow (perm)	3467	3552		1770	3475			1561			1419	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	676	994	43	34	548	75	41	45	25	32	22	348
RTOR Reduction (vph)	0	3	0	0	9	0	0	12	0	0	0	61
Lane Group Flow (vph)	676	1034	0	34	614	0	0	99	0	0	54	287
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	25.5	59.7		5.2	39.4			12.1			12.1	37.6
Effective Green, g (s)	25.5	59.7		5.2	39.4			12.1			12.1	37.6
Actuated g/C Ratio	0.27	0.63		0.05	0.41			0.13			0.13	0.40
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)	931	2232		97	1441			199			181	734
v/s Ratio Prot	c0.19	c0.29		0.02	0.18							c0.10
v/s Ratio Perm								0.06			0.04	0.07
v/c Ratio	0.73	0.46		0.35	0.43			0.50			0.30	0.39
Uniform Delay, d1	31.6	9.3		43.3	19.8			38.6			37.6	20.5
Progression Factor	1.17	0.24		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	2.5	0.6		2.2	0.9			1.9			0.9	0.3
Delay (s)	39.6	2.9		45.5	20.7			40.6			38.5	20.9
Level of Service	D	A		D	C			D			D	C
Approach Delay (s)		17.4			22.0			40.6			23.2	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

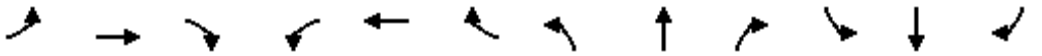
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	1126	40	16	508	117	16	12	181	150	0	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	45	1185	42	17	535	123	17	13	191	158	0	65
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	658			1227			1642	1967	593	1448	1886	267
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	658			1227			1642	1967	593	1448	1886	267
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			97			71	78	58	0	100	91
cM capacity (veh/h)	933			569			57	58	452	42	64	731

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	45	593	593	42	17	267	267	123	220	223
Volume Left	45	0	0	0	17	0	0	0	17	158
Volume Right	0	0	0	42	0	0	0	123	191	65
cSH	933	1700	1700	1700	569	1700	1700	1700	235	58
Volume to Capacity	0.05	0.35	0.35	0.02	0.03	0.16	0.16	0.07	0.93	3.87
Queue Length 95th (ft)	4	0	0	0	2	0	0	0	204	Err
Control Delay (s)	9.1	0.0	0.0	0.0	11.5	0.0	0.0	0.0	87.2	Err
Lane LOS	A				B				F	F
Approach Delay (s)	0.3				0.3				87.2	Err
Approach LOS									F	F

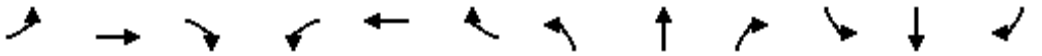
Intersection Summary				
Average Delay	941.7			
Intersection Capacity Utilization	70.5%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	257	332	433	1517	0	0	0	0	108	0	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	6.5	6.5						4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3471	1553	1787	3574						1671	1495
Flt Permitted		1.00	1.00	0.53	1.00						0.95	1.00
Satd. Flow (perm)		3471	1553	1002	3574						1671	1495
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	273	353	461	1614	0	0	0	0	115	0	322
RTOR Reduction (vph)	0	0	261	0	0	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	273	92	461	1614	0	0	0	0	0	115	292
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	1%	1%	1%	8%	8%	8%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4	3 4						5 6		5 6
Actuated Green, G (s)		25.5	25.5	62.0	68.5						23.5	23.5
Effective Green, g (s)		27.5	27.5	62.0	68.5						25.5	25.5
Actuated g/C Ratio		0.26	0.26	0.59	0.65						0.24	0.24
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		909	407	865	2332						406	363
v/s Ratio Prot		0.08		0.19	c0.45							
v/s Ratio Perm			0.06	0.13							0.07	c0.20
v/c Ratio		0.30	0.23	0.53	0.69						0.28	0.81
Uniform Delay, d1		31.0	30.4	11.9	11.6						32.3	37.4
Progression Factor		1.00	1.00	0.69	0.29						1.00	1.00
Incremental Delay, d2		0.2	0.3	0.3	0.5						1.7	17.2
Delay (s)		31.2	30.7	8.6	3.9						34.1	54.6
Level of Service		C	C	A	A						C	D
Approach Delay (s)		30.9			4.9			0.0			49.2	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

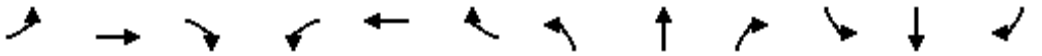
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	335	0	0	1223	154	787	0	395	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.91	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1703	3406			5085	1583	1698	1698	2814			
Flt Permitted	0.14	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	243	3406			5085	1583	1698	1698	2814			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	55	353	0	0	1287	162	828	0	416	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	106	0	0	0	0	0	0
Lane Group Flow (vph)	55	353	0	0	1287	56	414	414	416	0	0	0
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases	1 6					1 6	2 3		2 3			
Actuated Green, G (s)	55.0	61.5			29.5	29.5	30.5	30.5	30.5			
Effective Green, g (s)	55.0	63.5			31.5	31.5	32.5	32.5	32.5			
Actuated g/C Ratio	0.52	0.60			0.30	0.30	0.31	0.31	0.31			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	482	2060			1526	475	526	526	871			
v/s Ratio Prot	0.03	c0.10			c0.25							
v/s Ratio Perm	0.03					0.04	c0.24	0.24	0.15			
v/c Ratio	0.11	0.17			0.84	0.12	0.79	0.79	0.48			
Uniform Delay, d1	14.7	9.1			34.4	26.7	33.1	33.1	29.4			
Progression Factor	0.47	0.45			0.75	0.32	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.0			2.1	0.1	7.6	7.6	0.4			
Delay (s)	6.9	4.1			28.0	8.6	40.7	40.7	29.8			
Level of Service	A	A			C	A	D	D	C			
Approach Delay (s)		4.5			25.8			37.1			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

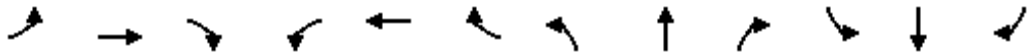
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	343	423	66	51	994	155	21	42	30	49	153	461
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	0.97	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.98		1.00	0.98			0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	1.00
Satd. Flow (prot)	3467	3502		1787	3502			1762			1859	1599
Flt Permitted	0.95	1.00		0.95	1.00			0.69			0.87	1.00
Satd. Flow (perm)	3467	3502		1787	3502			1233			1640	1599
Peak-hour factor, PHF	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Adj. Flow (vph)	434	535	84	65	1258	196	27	53	38	62	194	584
RTOR Reduction (vph)	0	10	0	0	11	0	0	17	0	0	0	15
Lane Group Flow (vph)	434	609	0	65	1443	0	0	101	0	0	256	569
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	18.4	59.6		7.1	48.3			20.3			20.3	38.7
Effective Green, g (s)	18.4	59.6		7.1	48.3			20.3			20.3	38.7
Actuated g/C Ratio	0.18	0.57		0.07	0.46			0.19			0.19	0.37
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)	608	1988		121	1611			238			317	681
v/s Ratio Prot	0.13	0.17		0.04	c0.41							c0.15
v/s Ratio Perm								0.08			0.16	0.21
v/c Ratio	0.71	0.31		0.54	0.90			0.42			0.81	0.84
Uniform Delay, d1	40.8	11.9		47.4	26.0			37.2			40.5	30.2
Progression Factor	0.91	0.72		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	3.9	0.4		4.5	8.2			1.2			14.0	8.7
Delay (s)	41.0	8.9		51.9	34.2			38.4			54.4	39.0
Level of Service	D	A		D	C			D			D	D
Approach Delay (s)		22.1			34.9			38.4			43.7	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		

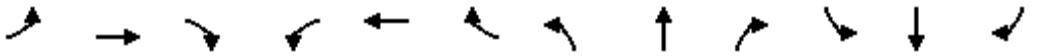
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	475	33	148	1278	301	8	5	15	18	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	92	625	43	195	1682	396	11	7	20	24	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2078			668			2051	3276	312	2591	2924	841
vC1, stage 1 conf vol							809	809		2071	2071	
vC2, stage 2 conf vol							1242	2467		520	853	
vCu, unblocked vol	2078			668			2051	3276	312	2591	2924	841
tC, single (s)	4.1			4.1			7.7	6.7	7.1	8.0	7.0	7.4
tC, 2 stage (s)							6.7	5.7		7.0	6.0	
tF (s)	2.2			2.2			3.6	4.1	3.4	3.7	4.2	3.5
p0 queue free %	65			79			73	0	97	20	100	96
cM capacity (veh/h)	264			924			39	4	666	30	18	268

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	92	312	312	43	195	841	841	396	37	36
Volume Left	92	0	0	0	195	0	0	0	11	24
Volume Right	0	0	0	43	0	0	0	396	20	12
cSH	264	1700	1700	1700	924	1700	1700	1700	19	42
Volume to Capacity	0.35	0.18	0.18	0.03	0.21	0.49	0.49	0.23	1.93	0.84
Queue Length 95th (ft)	38	0	0	0	20	0	0	0	125	81
Control Delay (s)	25.8	0.0	0.0	0.0	9.9	0.0	0.0	0.0	859.9	238.0
Lane LOS	D				A				F	F
Approach Delay (s)	3.1				0.9				859.9	238.0
Approach LOS									F	F

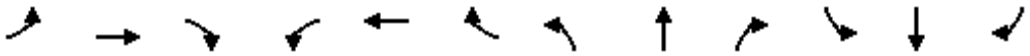
Intersection Summary				
Average Delay	14.3			
Intersection Capacity Utilization	52.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	824	718	435	594	0	0	0	0	117	0	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	6.5	6.5						4.5	4.5
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3574	1599	1770	3539						1703	1524
Flt Permitted		1.00	1.00	0.16	1.00						0.95	1.00
Satd. Flow (perm)		3574	1599	298	3539						1703	1524
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	849	740	448	612	0	0	0	0	121	0	44
RTOR Reduction (vph)	0	0	419	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	849	321	448	612	0	0	0	0	0	121	12
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	6%	6%	6%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		3 4		1 2	1 2 3 4						5 6	
Permitted Phases			3 4	3 4						5 6		5 6
Actuated Green, G (s)		25.0	25.0	52.5	59.0						23.0	23.0
Effective Green, g (s)		27.0	27.0	52.5	59.0						25.0	25.0
Actuated g/C Ratio		0.28	0.28	0.55	0.62						0.26	0.26
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)		1016	454	591	2198						448	401
v/s Ratio Prot		c0.24		c0.22	0.17							
v/s Ratio Perm			0.20	0.20							0.07	0.01
v/c Ratio		0.84	0.71	0.76	0.28						0.27	0.03
Uniform Delay, d1		31.9	30.5	20.5	8.2						27.8	26.0
Progression Factor		1.00	1.00	0.48	0.29						1.00	1.00
Incremental Delay, d2		6.1	5.0	4.5	0.1						1.5	0.1
Delay (s)		38.0	35.5	14.4	2.5						29.2	26.1
Level of Service		D	D	B	A						C	C
Approach Delay (s)		36.8			7.5			0.0			28.4	
Approach LOS		D			A			A			C	

Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	15.5
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

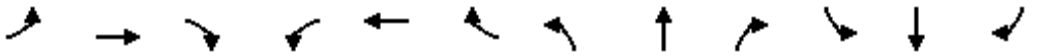
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	806	0	0	879	52	305	0	615	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	4.5			4.5	4.5	4.5	4.5	4.5			
Lane Util. Factor	1.00	0.95			0.91	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1787	3574			5085	1583	1665	1665	2760			
Flt Permitted	0.17	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	328	3574			5085	1583	1665	1665	2760			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	848	0	0	925	55	321	0	647	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	39	0	0	0	0	0	0
Lane Group Flow (vph)	78	848	0	0	925	17	160	161	647	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 5	1 4 5 6			1 6			2 3				
Permitted Phases	1 6					1 6	2 3		2 3			
Actuated Green, G (s)	51.0	57.5			26.5	26.5	24.5	24.5	24.5			
Effective Green, g (s)	51.0	59.5			28.5	28.5	26.5	26.5	26.5			
Actuated g/C Ratio	0.54	0.63			0.30	0.30	0.28	0.28	0.28			
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)	552	2238			1526	475	464	464	770			
v/s Ratio Prot	0.04	c0.24			c0.18							
v/s Ratio Perm	0.04					0.01	0.10	0.10	c0.23			
v/c Ratio	0.14	0.38			0.61	0.03	0.34	0.35	0.84			
Uniform Delay, d1	11.4	8.7			28.4	23.5	27.3	27.3	32.3			
Progression Factor	0.18	0.59			0.97	0.84	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.1			0.6	0.0	0.4	0.5	8.2			
Delay (s)	2.1	5.2			28.2	19.7	27.8	27.8	40.5			
Level of Service	A	A			C	B	C	C	D			
Approach Delay (s)		4.9			27.8			36.3			0.0	
Approach LOS		A			C			D			A	

Intersection Summary			
HCM Average Control Delay	23.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.1%	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												
Volume (vph)	642	944	41	32	521	71	39	43	24	30	21	331
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	0.97	0.95		1.00	0.95			1.00			1.00	1.00
Frt	1.00	0.99		1.00	0.98			0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.97	1.00
Satd. Flow (prot)	3467	3552		1770	3475			1791			1827	1599
Flt Permitted	0.95	1.00		0.95	1.00			0.86			0.75	1.00
Satd. Flow (perm)	3467	3552		1770	3475			1561			1419	1599
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	676	994	43	34	548	75	41	45	25	32	22	348
RTOR Reduction (vph)	0	3	0	0	9	0	0	12	0	0	0	61
Lane Group Flow (vph)	676	1034	0	34	614	0	0	99	0	0	54	287
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	25.5	59.7		5.2	39.4			12.1			12.1	37.6
Effective Green, g (s)	25.5	59.7		5.2	39.4			12.1			12.1	37.6
Actuated g/C Ratio	0.27	0.63		0.05	0.41			0.13			0.13	0.40
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)	931	2232		97	1441			199			181	734
v/s Ratio Prot	c0.19	c0.29		0.02	0.18							c0.10
v/s Ratio Perm								0.06			0.04	0.07
v/c Ratio	0.73	0.46		0.35	0.43			0.50			0.30	0.39
Uniform Delay, d1	31.6	9.3		43.3	19.8			38.6			37.6	20.5
Progression Factor	1.36	0.42		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	2.5	0.6		2.2	0.9			1.9			0.9	0.3
Delay (s)	45.4	4.5		45.5	20.7			40.6			38.5	20.9
Level of Service	D	A		D	C			D			D	C
Approach Delay (s)		20.7			22.0			40.6			23.2	
Approach LOS		C			C			D			C	

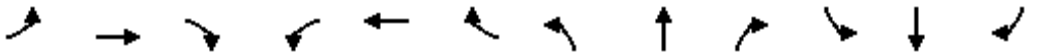
Intersection Summary			
HCM Average Control Delay	22.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	95.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	1126	40	16	508	117	16	12	181	150	0	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	45	1185	42	17	535	123	17	13	191	158	0	65
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	658			1227			1642	1967	593	1448	1886	267
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	658			1227			1642	1967	593	1448	1886	267
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			97			71	78	58	0	100	91
cM capacity (veh/h)	933			569			57	58	452	42	64	731

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	45	593	593	42	17	267	267	123	220	223
Volume Left	45	0	0	0	17	0	0	0	17	158
Volume Right	0	0	0	42	0	0	0	123	191	65
cSH	933	1700	1700	1700	569	1700	1700	1700	235	58
Volume to Capacity	0.05	0.35	0.35	0.02	0.03	0.16	0.16	0.07	0.93	3.87
Queue Length 95th (ft)	4	0	0	0	2	0	0	0	204	Err
Control Delay (s)	9.1	0.0	0.0	0.0	11.5	0.0	0.0	0.0	87.2	Err
Lane LOS	A				B				F	F
Approach Delay (s)	0.3				0.3				87.2	Err
Approach LOS									F	F

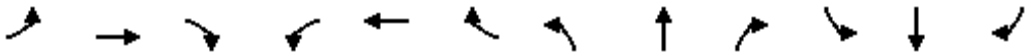
Intersection Summary				
Average Delay	941.7			
Intersection Capacity Utilization	70.5%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	257	332	433	1517	0	0	0	0	108	0	303
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3471	1553	1787	3574						1671	1495
Flt Permitted		1.00	1.00	0.49	1.00						0.95	1.00
Satd. Flow (perm)		3471	1553	927	3574						1671	1495
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	273	353	461	1614	0	0	0	0	115	0	322
RTOR Reduction (vph)	0	0	286	0	0	0	0	0	0	0	0	34
Lane Group Flow (vph)	0	273	67	461	1614	0	0	0	0	0	115	288
Heavy Vehicles (%)	4%	4%	4%	1%	1%	1%	1%	1%	1%	8%	8%	8%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		15.0	15.0	49.0	61.0						19.0	19.0
Effective Green, g (s)		17.0	17.0	49.0	49.0						21.0	21.0
Actuated g/C Ratio		0.19	0.19	0.54	0.54						0.23	0.23
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)		656	293	830	1946						390	349
v/s Ratio Prot		0.08		0.21	c0.45							
v/s Ratio Perm			0.04	0.09							0.07	c0.19
v/c Ratio		0.42	0.23	0.56	0.83						0.29	0.83
Uniform Delay, d1		32.1	30.9	12.6	17.0						28.4	32.8
Progression Factor		1.00	1.00	0.37	0.21						1.00	1.00
Incremental Delay, d2		0.4	0.4	0.2	1.1						1.9	19.6
Delay (s)		32.6	31.3	4.9	4.6						30.3	52.3
Level of Service		C	C	A	A						C	D
Approach Delay (s)		31.9			4.7			0.0			46.6	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

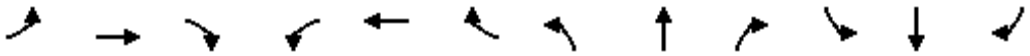
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	52	335	0	0	1223	154	787	0	395	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1703	3406			3539	1583	1698	1698	1599			
Flt Permitted	0.12	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	224	3406			3539	1583	1698	1698	1599			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	55	353	0	0	1287	162	828	0	416	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	29	0	0	305	0	0	0
Lane Group Flow (vph)	55	353	0	0	1287	133	414	414	111	0	0	0
Heavy Vehicles (%)	6%	6%	6%	2%	2%	2%	1%	1%	1%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	50.0	56.0			32.0	32.0	22.0	22.0	22.0			
Effective Green, g (s)	50.0	56.0			34.0	34.0	24.0	24.0	24.0			
Actuated g/C Ratio	0.56	0.62			0.38	0.38	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)	420	2119			1337	598	453	453	426			
v/s Ratio Prot	0.03	c0.10			c0.36							
v/s Ratio Perm	0.05					0.08	c0.24	0.24	0.07			
v/c Ratio	0.13	0.17			0.96	0.22	0.91	0.91	0.26			
Uniform Delay, d1	26.5	7.2			27.4	19.0	32.0	32.0	26.0			
Progression Factor	0.97	1.05			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.0			16.4	0.2	22.7	22.7	0.3			
Delay (s)	25.8	7.6			43.8	19.2	54.7	54.7	26.3			
Level of Service	C	A			D	B	D	D	C			
Approach Delay (s)		10.0			41.0			45.2			0.0	
Approach LOS		B			D			D			A	

Intersection Summary			
HCM Average Control Delay	38.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

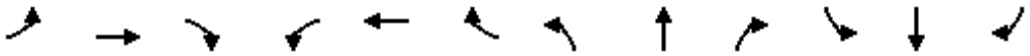
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	343	423	66	51	994	155	21	42	30	49	153	461
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	434	535	84	65	1258	196	27	53	38	62	194	584
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		463										
pX, platoon unblocked												
vC, conflicting volume	1454			619			2884	3029	309	2686	2973	727
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1454			619			2884	3029	309	2686	2973	727
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	7			93			0	0	94	0	0	0
cM capacity (veh/h)	466			964			0	1	686	0	1	369

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	434	357	262	65	839	616	118	839
Volume Left	434	0	0	65	0	0	27	62
Volume Right	0	0	84	0	0	196	38	584
cSH	466	1700	1700	964	1700	1700	0	0
Volume to Capacity	0.93	0.21	0.15	0.07	0.49	0.36	Err	Err
Queue Length 95th (ft)	273	0	0	5	0	0	Err	Err
Control Delay (s)	56.2	0.0	0.0	9.0	0.0	0.0	Err	Err
Lane LOS	F			A			F	F
Approach Delay (s)	23.2			0.4			Err	Err
Approach LOS							F	F

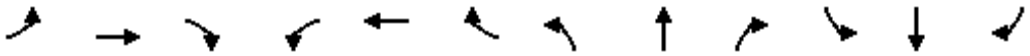
Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	475	33	148	1278	301	8	5	15	18	0	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Hourly flow rate (vph)	92	625	43	195	1682	396	11	7	20	24	0	12
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		Raised			Raised							
Median storage veh)		2			2							
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2078			668			2051	3276	312	2591	2924	841
vC1, stage 1 conf vol							809	809		2071	2071	
vC2, stage 2 conf vol							1242	2467		520	853	
vCu, unblocked vol	2078			668			2051	3276	312	2591	2924	841
tC, single (s)	4.1			4.1			7.7	6.7	7.1	8.0	7.0	7.4
tC, 2 stage (s)							6.7	5.7		7.0	6.0	
tF (s)	2.2			2.2			3.6	4.1	3.4	3.7	4.2	3.5
p0 queue free %	65			79			73	0	97	20	100	96
cM capacity (veh/h)	264			924			39	4	666	30	18	268

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	92	312	312	43	195	841	841	396	37	36
Volume Left	92	0	0	0	195	0	0	0	11	24
Volume Right	0	0	0	43	0	0	0	396	20	12
cSH	264	1700	1700	1700	924	1700	1700	1700	19	42
Volume to Capacity	0.35	0.18	0.18	0.03	0.21	0.49	0.49	0.23	1.93	0.84
Queue Length 95th (ft)	38	0	0	0	20	0	0	0	125	81
Control Delay (s)	25.8	0.0	0.0	0.0	9.9	0.0	0.0	0.0	859.9	238.0
Lane LOS	D				A				F	F
Approach Delay (s)	3.1				0.9				859.9	238.0
Approach LOS									F	F

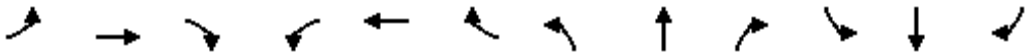
Intersection Summary				
Average Delay	14.3			
Intersection Capacity Utilization	52.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	824	718	435	594	0	0	0	0	117	0	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0						4.0	4.0
Lane Util. Factor		0.95	1.00	1.00	0.95						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						0.95	1.00
Satd. Flow (prot)		3574	1599	1770	3539						1703	1524
Flt Permitted		1.00	1.00	0.17	1.00						0.95	1.00
Satd. Flow (perm)		3574	1599	324	3539						1703	1524
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	849	740	448	612	0	0	0	0	121	0	44
RTOR Reduction (vph)	0	0	330	0	0	0	0	0	0	0	0	37
Lane Group Flow (vph)	0	849	410	448	612	0	0	0	0	0	121	7
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	6%	6%	6%
Turn Type			Perm	D.P+P						Perm		Perm
Protected Phases		16		5 8	5 8 16						6	
Permitted Phases			16	16						6		6
Actuated Green, G (s)		23.0	23.0	54.2	66.2						13.0	13.0
Effective Green, g (s)		25.0	25.0	54.2	54.2						15.0	15.0
Actuated g/C Ratio		0.28	0.28	0.61	0.61						0.17	0.17
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)		1002	448	703	2150						286	256
v/s Ratio Prot		0.24		c0.22	0.17							
v/s Ratio Perm			c0.26	0.16							0.07	0.00
v/c Ratio		0.85	0.92	0.64	0.28						0.42	0.03
Uniform Delay, d1		30.3	31.1	15.0	8.3						33.2	31.0
Progression Factor		1.00	1.00	3.29	0.00						1.00	1.00
Incremental Delay, d2		6.8	23.2	0.8	0.1						4.5	0.2
Delay (s)		37.1	54.3	50.4	0.1						37.8	31.2
Level of Service		D	D	D	A						D	C
Approach Delay (s)		45.1			21.3			0.0			36.0	
Approach LOS		D			C			A			D	

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	89.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

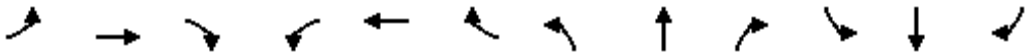
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	806	0	0	879	52	305	0	615	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95			0.95	1.00	0.95	0.95	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1787	3574			3539	1583	1665	1665	1568			
Flt Permitted	0.17	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	327	3574			3539	1583	1665	1665	1568			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	848	0	0	925	55	321	0	647	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	14	0	0	99	0	0	0
Lane Group Flow (vph)	78	848	0	0	925	41	160	161	548	0	0	0
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	1%	1%	1%
Turn Type	D.P+P					Perm	Perm		Perm			
Protected Phases	4 12	2 4 12			2			1				
Permitted Phases	2					2	1		1			
Actuated Green, G (s)	42.2	48.2			23.0	23.0	29.0	29.0	29.0			
Effective Green, g (s)	42.2	48.2			25.0	25.0	31.0	31.0	31.0			
Actuated g/C Ratio	0.47	0.54			0.28	0.28	0.35	0.35	0.35			
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)	469	1931			992	444	579	579	545			
v/s Ratio Prot	0.04	c0.24			c0.26							
v/s Ratio Perm	0.04					0.03	0.10	0.10	c0.35			
v/c Ratio	0.17	0.44			0.93	0.09	0.28	0.28	1.01			
Uniform Delay, d1	25.5	12.4			31.3	23.7	21.0	21.0	29.1			
Progression Factor	0.21	0.24			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	0.1	0.1			14.9	0.1	0.3	0.3	39.8			
Delay (s)	5.4	3.0			46.2	23.8	21.3	21.3	68.9			
Level of Service	A	A			D	C	C	C	E			
Approach Delay (s)		3.2			44.9			53.1			0.0	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	89.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

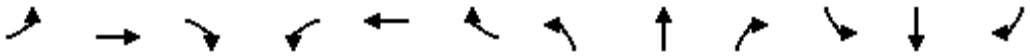
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	642	944	41	32	521	71	39	43	24	30	21	331
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	676	994	43	34	548	75	41	45	25	32	22	348
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		463										
pX, platoon unblocked				0.94			0.94	0.94	0.94	0.94	0.94	
vC, conflicting volume	623			1037			3068	3057	518	2549	3042	312
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	623			901			3073	3061	347	2518	3044	312
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	30			95			0	0	96	0	0	49
cM capacity (veh/h)	961			701			0	3	610	0	3	687

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	676	662	374	34	366	258	112	402
Volume Left	676	0	0	34	0	0	41	32
Volume Right	0	0	43	0	0	75	25	348
cSH	961	1700	1700	701	1700	1700	0	0
Volume to Capacity	0.70	0.39	0.22	0.05	0.22	0.15	Err	Err
Queue Length 95th (ft)	152	0	0	4	0	0	Err	Err
Control Delay (s)	17.1	0.0	0.0	10.4	0.0	0.0	Err	Err
Lane LOS	C			B			F	F
Approach Delay (s)	6.8			0.5			Err	Err
Approach LOS							F	F

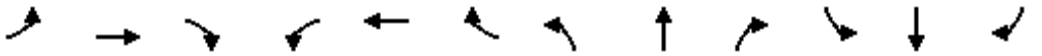
Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	1126	40	16	508	117	16	12	181	150	0	62
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	45	1185	42	17	535	123	17	13	191	158	0	65
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	658			1227			1642	1967	593	1448	1886	267
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	658			1227			1642	1967	593	1448	1886	267
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			97			71	78	58	0	100	91
cM capacity (veh/h)	933			569			57	58	452	42	64	731

Direction, Lane #	EB 1	EB 2	EB 3	EB 4	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	45	593	593	42	17	267	267	123	220	223
Volume Left	45	0	0	0	17	0	0	0	17	158
Volume Right	0	0	0	42	0	0	0	123	191	65
cSH	933	1700	1700	1700	569	1700	1700	1700	235	58
Volume to Capacity	0.05	0.35	0.35	0.02	0.03	0.16	0.16	0.07	0.93	3.87
Queue Length 95th (ft)	4	0	0	0	2	0	0	0	204	Err
Control Delay (s)	9.1	0.0	0.0	0.0	11.5	0.0	0.0	0.0	87.2	Err
Lane LOS	A				B				F	F
Approach Delay (s)	0.3				0.3				87.2	Err
Approach LOS									F	F

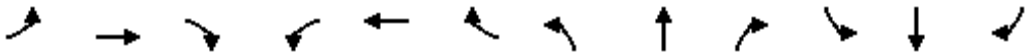
Intersection Summary				
Average Delay	941.7			
Intersection Capacity Utilization	70.5%	ICU Level of Service	C	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	65	0	50	105	25	0	0	50	75
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	0	76	0	59	124	29	0	0	59	88
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	394	335	59	335	424	29	147			29		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	394	335	59	335	424	29	147			29		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	87	100	94	91			100		
cM capacity (veh/h)	500	537	1010	578	477	1045	1441			1584		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	135	124	29	59	88
Volume Left	76	124	0	0	0
Volume Right	59	0	0	0	88
cSH	717	1441	1700	1700	1700
Volume to Capacity	0.19	0.09	0.02	0.03	0.05
Queue Length 95th (ft)	17	7	0	0	0
Control Delay (s)	11.2	7.7	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	11.2	6.2		0.0	
Approach LOS	B				

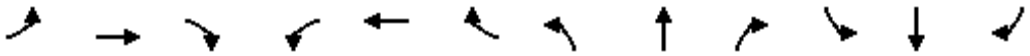
Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	30.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	0	55	0	0	0	0	110	200	20	95	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	23	0	62	0	0	0	0	125	227	23	108	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	278	506	108	341	278	125	108			352		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	278	506	108	341	278	125	108			352		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	93	100	100	100	100			98		
cM capacity (veh/h)	658	456	938	559	613	918	1483			1212		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	85	125	227	23	108
Volume Left	23	0	0	23	0
Volume Right	62	0	227	0	0
cSH	842	1700	1700	1212	1700
Volume to Capacity	0.10	0.07	0.13	0.02	0.06
Queue Length 95th (ft)	8	0	0	1	0
Control Delay (s)	9.8	0.0	0.0	8.0	0.0
Lane LOS	A			A	
Approach Delay (s)	9.8	0.0		1.4	
Approach LOS	A				

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	30.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	5	15	5	5	5	10	50	10	0	110	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	0	6	19	6	6	6	13	65	13	0	143	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	250	247	71	192	240	71	143			78		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	250	247	71	192	240	71	143			78		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	98	99	99	99	99			100		
cM capacity (veh/h)	671	651	980	728	656	980	1423			1526		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	26	19	91	71	71
Volume Left	0	6	13	0	0
Volume Right	19	6	13	0	0
cSH	870	766	1423	1526	1700
Volume to Capacity	0.03	0.03	0.01	0.00	0.04
Queue Length 95th (ft)	2	2	1	0	0
Control Delay (s)	9.3	9.8	1.1	0.0	0.0
Lane LOS	A	A	A		
Approach Delay (s)	9.3	9.8	1.1	0.0	
Approach LOS	A	A			

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	22.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	0	40	10	0	20	5	260	40	25	125	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	38	0	51	13	0	26	6	333	51	32	160	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	429	622	160	647	596	192	160			385		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	429	622	160	647	596	192	160			385		
tC, single (s)	7.6	6.6	7.0	7.8	6.8	7.2	4.3			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.2	3.5	2.3			2.2		
p0 queue free %	92	100	94	96	100	97	100			97		
cM capacity (veh/h)	474	383	847	302	375	775	1353			1178		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	90	38	173	218	192	0
Volume Left	38	13	6	0	32	0
Volume Right	51	26	0	51	0	0
cSH	633	509	1353	1700	1178	1700
Volume to Capacity	0.14	0.08	0.00	0.13	0.03	0.00
Queue Length 95th (ft)	12	6	0	0	2	0
Control Delay (s)	11.6	12.7	0.3	0.0	1.6	0.0
Lane LOS	B	B	A		A	
Approach Delay (s)	11.6	12.7	0.1		1.6	
Approach LOS	B	B				

Intersection Summary				
Average Delay	2.7			
Intersection Capacity Utilization	32.6%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	80	0	50	70	60	0	0	50	40
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	91	0	57	80	68	0	0	57	45
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	341	284	57	284	330	68	102			68		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	341	284	57	284	330	68	102			68		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	86	100	94	95			100		
cM capacity (veh/h)	556	593	1012	637	555	989	1496			1527		

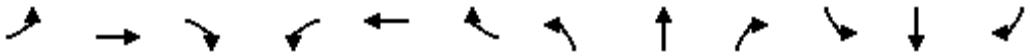
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	148	80	68	57	45
Volume Left	91	80	0	0	0
Volume Right	57	0	0	0	45
cSH	738	1496	1700	1700	1700
Volume to Capacity	0.20	0.05	0.04	0.03	0.03
Queue Length 95th (ft)	19	4	0	0	0
Control Delay (s)	11.1	7.5	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	11.1	4.1		0.0	
Approach LOS	B				

Intersection Summary				
Average Delay	5.6			
Intersection Capacity Utilization	24.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	5	65	0	0	0	0	90	75	15	115	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	47	6	76	0	0	0	0	105	87	17	134	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	273	360	134	352	273	105	134			192		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	273	360	134	352	273	105	134			192		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	99	92	100	100	100	100			99		
cM capacity (veh/h)	675	561	918	540	622	944	1445			1388		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	128	105	87	17	134
Volume Left	47	0	0	17	0
Volume Right	76	0	87	0	0
cSH	791	1700	1700	1388	1700
Volume to Capacity	0.16	0.06	0.05	0.01	0.08
Queue Length 95th (ft)	14	0	0	1	0
Control Delay (s)	10.4	0.0	0.0	7.6	0.0
Lane LOS	B			A	
Approach Delay (s)	10.4	0.0		0.9	
Approach LOS	B				

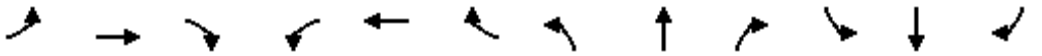
Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	24.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	5	10	15	5	0	10	90	10	0	65	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	6	11	17	6	0	11	102	11	0	74	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	207	210	37	182	205	108	74			114		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	207	210	37	182	205	108	74			114		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	99	98	99	100	99			100		
cM capacity (veh/h)	726	683	1030	748	688	928	1524			1473		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	17	23	125	37	37
Volume Left	0	17	11	0	0
Volume Right	11	0	11	0	0
cSH	881	732	1524	1473	1700
Volume to Capacity	0.02	0.03	0.01	0.00	0.02
Queue Length 95th (ft)	1	2	1	0	0
Control Delay (s)	9.2	10.1	0.7	0.0	0.0
Lane LOS	A	B	A		
Approach Delay (s)	9.2	10.1	0.7	0.0	
Approach LOS	A	B			

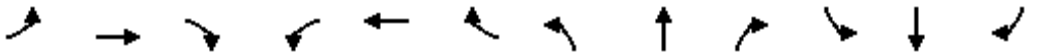
Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	0	10	0	0	5	0	155	5	10	165	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	11	0	11	0	0	6	0	178	6	11	190	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	307	397	190	405	405	92	201			184		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	307	397	190	405	405	92	201			184		
tC, single (s)	7.6	6.6	7.0	7.7	6.7	7.1	4.4			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.1	3.4	2.3			2.2		
p0 queue free %	98	100	99	100	100	99	100			99		
cM capacity (veh/h)	612	533	817	499	509	919	1292			1396		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	23	6	89	95	201	11
Volume Left	11	0	0	0	11	0
Volume Right	11	6	0	6	0	11
cSH	699	919	1292	1700	1396	1700
Volume to Capacity	0.03	0.01	0.00	0.06	0.01	0.01
Queue Length 95th (ft)	3	0	0	0	1	0
Control Delay (s)	10.3	8.9	0.0	0.0	0.5	0.0
Lane LOS	B	A			A	
Approach Delay (s)	10.3	8.9	0.0		0.5	
Approach LOS	B	A				

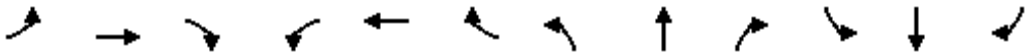
Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	31.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	112	0	85	122	24	0	0	68	89
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	0	132	0	100	144	28	0	0	80	105
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	495	395	80	395	500	28	185			28		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	495	395	80	395	500	28	185			28		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	75	100	90	90			100		
cM capacity (veh/h)	405	487	983	520	424	1047	1396			1585		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	232	144	28	80	105
Volume Left	132	144	0	0	0
Volume Right	100	0	0	0	105
cSH	664	1396	1700	1700	1700
Volume to Capacity	0.35	0.10	0.02	0.05	0.06
Queue Length 95th (ft)	39	9	0	0	0
Control Delay (s)	13.3	7.9	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	13.3	6.6		0.0	
Approach LOS	B				

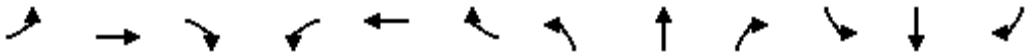
Intersection Summary				
Average Delay	7.2			
Intersection Capacity Utilization	37.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	23	0	63	0	0	0	0	125	312	31	134	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	26	0	72	0	0	0	0	142	355	35	152	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	365	719	152	436	365	142	152			497		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	365	719	152	436	365	142	152			497		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	100	92	100	100	100	100			97		
cM capacity (veh/h)	571	339	886	471	540	898	1428			1072		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	98	142	355	35	152
Volume Left	26	0	0	35	0
Volume Right	72	0	355	0	0
cSH	772	1700	1700	1072	1700
Volume to Capacity	0.13	0.08	0.21	0.03	0.09
Queue Length 95th (ft)	11	0	0	3	0
Control Delay (s)	10.3	0.0	0.0	8.5	0.0
Lane LOS	B			A	
Approach Delay (s)	10.3	0.0		1.6	
Approach LOS	B				

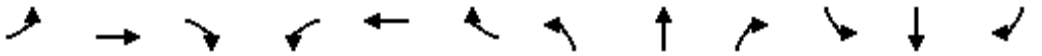
Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	37.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	6	28	5	6	3	43	70	9	0	124	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	3	8	36	6	8	4	56	91	12	0	161	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	379	377	82	329	372	97	164			103		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	379	377	82	329	372	97	164			103		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	99	96	99	99	100	96			100		
cM capacity (veh/h)	531	533	965	556	537	944	1398			1495		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	47	18	158	81	83
Volume Left	3	6	56	0	0
Volume Right	36	4	12	0	3
cSH	818	600	1398	1495	1700
Volume to Capacity	0.06	0.03	0.04	0.00	0.05
Queue Length 95th (ft)	5	2	3	0	0
Control Delay (s)	9.7	11.2	2.9	0.0	0.0
Lane LOS	A	B	A		
Approach Delay (s)	9.7	11.2	2.9	0.0	
Approach LOS	A	B			

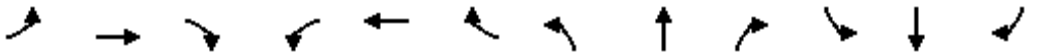
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	37	0	43	24	0	23	3	359	47	35	155	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	47	0	55	31	0	29	4	460	60	45	199	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	556	817	199	842	787	260	199			521		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	556	817	199	842	787	260	199			521		
tC, single (s)	7.6	6.6	7.0	7.8	6.8	7.2	4.3			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.7	4.2	3.5	2.3			2.2		
p0 queue free %	87	100	93	85	100	96	100			96		
cM capacity (veh/h)	377	290	800	211	283	698	1308			1049		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	103	60	234	290	244	0
Volume Left	47	31	4	0	45	0
Volume Right	55	29	0	60	0	0
cSH	526	321	1308	1700	1049	1700
Volume to Capacity	0.19	0.19	0.00	0.17	0.04	0.00
Queue Length 95th (ft)	18	17	0	0	3	0
Control Delay (s)	13.5	18.8	0.2	0.0	1.9	0.0
Lane LOS	B	C	A		A	
Approach Delay (s)	13.5	18.8	0.1		1.9	
Approach LOS	B	C				

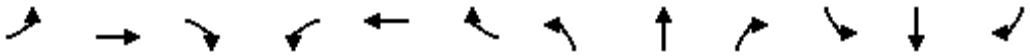
Intersection Summary				
Average Delay	3.2			
Intersection Capacity Utilization	37.2%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	155	0	70	101	70	0	0	61	64
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	0	0	176	0	80	115	80	0	0	69	73
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	458	378	69	378	451	80	142			80		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	458	378	69	378	451	80	142			80		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	67	100	92	92			100		
cM capacity (veh/h)	444	511	996	541	461	975	1447			1512		

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	256	115	80	69	73
Volume Left	176	115	0	0	0
Volume Right	80	0	0	0	73
cSH	628	1447	1700	1700	1700
Volume to Capacity	0.41	0.08	0.05	0.04	0.04
Queue Length 95th (ft)	49	6	0	0	0
Control Delay (s)	14.6	7.7	0.0	0.0	0.0
Lane LOS	B	A			
Approach Delay (s)	14.6	4.5		0.0	
Approach LOS	B				

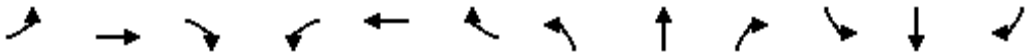
Intersection Summary				
Average Delay	7.8			
Intersection Capacity Utilization	32.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	0	76	0	0	0	0	135	121	31	181	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	76	0	88	0	0	0	0	157	141	36	210	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	440	580	210	528	440	157	210			298		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	440	580	210	528	440	157	210			298		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	100	89	100	100	100	100			97		
cM capacity (veh/h)	518	415	832	400	494	883	1354			1269		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	164	157	141	36	210
Volume Left	76	0	0	36	0
Volume Right	88	0	141	0	0
cSH	650	1700	1700	1269	1700
Volume to Capacity	0.25	0.09	0.08	0.03	0.12
Queue Length 95th (ft)	25	0	0	2	0
Control Delay (s)	12.4	0.0	0.0	7.9	0.0
Lane LOS	B			A	
Approach Delay (s)	12.4	0.0		1.2	
Approach LOS	B				

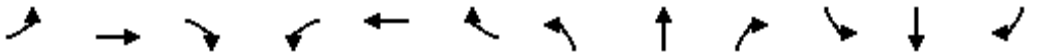
Intersection Summary				
Average Delay	3.3			
Intersection Capacity Utilization	32.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	3	30	16	8	0	35	106	13	0	77	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	5	3	34	18	9	0	40	120	15	0	88	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	300	303	44	287	296	128	89			135		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	300	303	44	287	296	128	89			135		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	99	97	97	98	100	97			100		
cM capacity (veh/h)	612	595	1019	609	600	902	1505			1447		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total	42	27	175	44	45
Volume Left	5	18	40	0	0
Volume Right	34	0	15	0	1
cSH	902	606	1505	1447	1700
Volume to Capacity	0.05	0.05	0.03	0.00	0.03
Queue Length 95th (ft)	4	4	2	0	0
Control Delay (s)	9.2	11.2	1.9	0.0	0.0
Lane LOS	A	B	A		
Approach Delay (s)	9.2	11.2	1.9	0.0	
Approach LOS	A	B			

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	26.9%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	0	10	2	4	41	0	215	8	9	246	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	14	0	11	2	5	47	0	247	9	10	283	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	476	560	283	567	570	128	298			256		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	476	560	283	567	570	128	298			256		
tC, single (s)	7.6	6.6	7.0	7.7	6.7	7.1	4.4			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.1	3.4	2.3			2.2		
p0 queue free %	97	100	98	99	99	95	100			99		
cM capacity (veh/h)	437	430	711	379	408	870	1184			1313		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	25	54	124	133	293	15
Volume Left	14	2	0	0	10	0
Volume Right	11	47	0	9	0	15
cSH	530	756	1184	1700	1313	1700
Volume to Capacity	0.05	0.07	0.00	0.08	0.01	0.01
Queue Length 95th (ft)	4	6	0	0	1	0
Control Delay (s)	12.1	10.1	0.0	0.0	0.3	0.0
Lane LOS	B	B			A	
Approach Delay (s)	12.1	10.1	0.0		0.3	
Approach LOS	B	B				

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	33.8%	ICU Level of Service		A
Analysis Period (min)	15			

Appendix L

Queuing Report

Intersection: 3: Northland (CTH OO) & SB 41 OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	L	T	T	T	T	R	L	R
Maximum Queue (ft)	184	227	196	134	121	123	310	212
Average Queue (ft)	101	143	152	77	55	50	169	38
95th Queue (ft)	181	246	216	142	112	131	279	159
Link Distance (ft)		1932	1932	1132	1132		350	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250					350		200
Storage Blk Time (%)							1	0
Queuing Penalty (veh)							6	0

Intersection: 6: Northland (CTH OO) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	L	T	T	T	T	R	LT
Maximum Queue (ft)	425	688	607	348	488	365	118
Average Queue (ft)	402	262	241	255	391	102	92
95th Queue (ft)	459	607	508	389	478	369	141
Link Distance (ft)		1132	1132	2107	2107		1421
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	400					340	
Storage Blk Time (%)	11				17	0	
Queuing Penalty (veh)	49				13	0	

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	L	TR
Maximum Queue (ft)	36	364	280	30	111	86	138	52	11	7	138	222
Average Queue (ft)	15	183	144	12	72	32	54	31	2	3	112	84
95th Queue (ft)	33	371	284	34	116	58	84	46	8	8	148	223
Link Distance (ft)		606	606			1932	1932			1911		1306
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	180			225	185			225	120		115	
Storage Blk Time (%)		7	2								15	1
Queuing Penalty (veh)		4	1								14	2

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	LT	R	L	TR
Maximum Queue (ft)	27	384	396	522	202	127	130	65	128	96	52	180
Average Queue (ft)	15	228	261	363	130	65	87	47	64	28	16	127
95th Queue (ft)	37	371	414	522	197	130	152	60	124	80	49	176
Link Distance (ft)		2107	2107	2107		709	709	1353	1353		113	113
Upstream Blk Time (%)												14
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	105				590					770		
Storage Blk Time (%)		40					0					
Queuing Penalty (veh)		14					0					

Intersection: 15: SB 41 OFF &

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 102

Intersection: 3: Northland (CTH OO) & SB 41 OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	L	T	T	T	T	R	L	R
Maximum Queue (ft)	275	1330	820	114	153	53	364	224
Average Queue (ft)	275	906	616	69	61	8	184	179
95th Queue (ft)	275	1242	1051	123	90	38	387	266
Link Distance (ft)		1932	1932	1132	1132		350	
Upstream Blk Time (%)							2	
Queuing Penalty (veh)							13	
Storage Bay Dist (ft)	250					350		200
Storage Blk Time (%)	73						1	9
Queuing Penalty (veh)	408						8	16

Intersection: 6: Northland (CTH OO) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	L	T	T	T	T	R	LT
Maximum Queue (ft)	245	160	202	577	638	365	221
Average Queue (ft)	155	129	151	484	536	125	146
95th Queue (ft)	230	180	192	614	680	387	223
Link Distance (ft)		1132	1132	2107	2107		1421
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	400					340	
Storage Blk Time (%)					34		
Queuing Penalty (veh)					62		

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	81	261	257	28	209	1996	264	55	35	72	47	139
Average Queue (ft)	31	164	144	11	157	410	163	32	20	43	13	106
95th Queue (ft)	70	236	227	32	231	1486	276	60	42	72	43	159
Link Distance (ft)		606	606			1932	1932			1911	1911	
Upstream Blk Time (%)						1						
Queuing Penalty (veh)						6						
Storage Bay Dist (ft)	180			225	185			225	120			115
Storage Blk Time (%)		6	1		11	0	0					10
Queuing Penalty (veh)		4	1		63	1	0					17

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	244
Average Queue (ft)	122
95th Queue (ft)	234
Link Distance (ft)	1306
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	6
Queuing Penalty (veh)	12

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	LT	R	L	TR
Maximum Queue (ft)	129	707	743	90	238	354	390	134	166	145	52	118
Average Queue (ft)	101	568	588	36	102	258	278	96	127	101	31	83
95th Queue (ft)	140	672	701	54	189	305	335	147	167	158	66	136
Link Distance (ft)		2107	2107	2107		709	709	1353	1353		113	113
Upstream Blk Time (%)												6
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	105				590					770		
Storage Blk Time (%)	9	65					39					
Queuing Penalty (veh)	47	98					29					

Intersection: 15: SB 41 OFF &

Movement	SB
Directions Served	T
Maximum Queue (ft)	140
Average Queue (ft)	20
95th Queue (ft)	101
Link Distance (ft)	1082
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 784

Intersection: 3: Northland (CTH OO) & SB 41 OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	T	T	T	R	L	R	R
Maximum Queue (ft)	163	140	197	319	259	351	350	342	191
Average Queue (ft)	104	106	106	194	179	141	213	177	142
95th Queue (ft)	157	156	176	305	265	328	316	314	188
Link Distance (ft)		1102	1102	1127	1127		350		
Upstream Blk Time (%)							1	0	
Queuing Penalty (veh)							10	0	
Storage Bay Dist (ft)	250					500		375	375
Storage Blk Time (%)							1	0	
Queuing Penalty (veh)							6	1	

Intersection: 6: Northland (CTH OO) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	LT
Maximum Queue (ft)	374	142	304	537	615	358	115	120
Average Queue (ft)	254	99	164	294	347	51	62	81
95th Queue (ft)	395	140	274	575	664	258	112	103
Link Distance (ft)		1127	1127	1058	1058			1421
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	400					340	300	
Storage Blk Time (%)					18	0		
Queuing Penalty (veh)					15	0		

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	L
Maximum Queue (ft)	204	387	325	30	209	488	506	245	38	50	67	140
Average Queue (ft)	141	274	252	16	93	289	297	97	4	24	33	139
95th Queue (ft)	241	431	348	40	179	472	513	250	15	49	64	141
Link Distance (ft)		606	606			766	766			1911	1911	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	180			225	185			225	120			115
Storage Blk Time (%)	4	13	9		0	15	11	0				57
Queuing Penalty (veh)	24	29	4		0	37	33	1				77

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	493	493
Average Queue (ft)	326	327
95th Queue (ft)	502	538
Link Distance (ft)	1305	1305
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	LT	R	L	TR
Maximum Queue (ft)	129	353	396	117	615	692	719	210	223	53	77	142
Average Queue (ft)	47	241	284	36	498	313	329	140	159	36	54	121
95th Queue (ft)	106	399	438	109	671	617	654	222	214	60	83	136
Link Distance (ft)		981	981	981		704	704	1370	1370		113	113
Upstream Blk Time (%)						0	1					69
Queuing Penalty (veh)						0	0					0
Storage Bay Dist (ft)	105				590					770		
Storage Blk Time (%)	0	36			4		22					
Queuing Penalty (veh)	0	23			21		12					

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	B5
Directions Served	T
Maximum Queue (ft)	837
Average Queue (ft)	756
95th Queue (ft)	852
Link Distance (ft)	822
Upstream Blk Time (%)	6
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: SB 41 OFF &

Movement	SB
Directions Served	T
Maximum Queue (ft)	112
Average Queue (ft)	16
95th Queue (ft)	81
Link Distance (ft)	1082
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	320
Average Queue (ft)	293
95th Queue (ft)	339
Link Distance (ft)	286
Upstream Blk Time (%)	60
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	90
Average Queue (ft)	41
95th Queue (ft)	77
Link Distance (ft)	322
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 294

Intersection: 3: Northland (CTH OO) & SB 41 OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	T	T	T	R	L	R	R
Maximum Queue (ft)	206	74	73	288	288	55	181	251	254
Average Queue (ft)	171	51	56	121	113	16	116	187	187
95th Queue (ft)	217	80	82	215	193	57	155	257	249
Link Distance (ft)		1102	1102	1127	1127		350		
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	250					500		375	375
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 6: Northland (CTH OO) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	L	LT
Maximum Queue (ft)	312	139	201	715	761	365	243	281
Average Queue (ft)	202	93	101	628	666	104	105	117
95th Queue (ft)	369	148	185	754	795	376	145	178
Link Distance (ft)		1127	1127	1058	1058			1421
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	400					340	300	
Storage Blk Time (%)					35	0		0
Queuing Penalty (veh)					74	1		0

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B17	B17	NB	NB
Directions Served	L	T	T	R	L	T	T	R	T	T	L	T
Maximum Queue (ft)	205	621	621	54	209	780	782	250	422	400	194	278
Average Queue (ft)	204	594	570	24	112	615	634	187	47	91	166	200
95th Queue (ft)	205	703	733	53	192	913	922	307	199	281	266	287
Link Distance (ft)		606	606			766	766		1102	1102		1913
Upstream Blk Time (%)		37	7			8	10					
Queuing Penalty (veh)		0	0			92	113					
Storage Bay Dist (ft)	180			225	185			225			120	
Storage Blk Time (%)	68	6	4		4	33	37	0			74	54
Queuing Penalty (veh)	460	29	4		31	110	102	1			119	59

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	NB	NB	SB	SB	SB
Directions Served	T	R	L	T	TR
Maximum Queue (ft)	274	63	140	782	783
Average Queue (ft)	198	12	139	623	631
95th Queue (ft)	278	48	140	875	865
Link Distance (ft)	1913	1913		1305	1305
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			115		
Storage Blk Time (%)			94	7	
Queuing Penalty (veh)			128	15	

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	EB	EB	EB	EB	B18	B18	B18	WB	WB	WB	WB	NB
Directions Served	L	T	T	R	T	T	T	L	T	T	R	L
Maximum Queue (ft)	130	1001	1026	1061	309	351	310	614	724	724	175	1038
Average Queue (ft)	129	928	958	799	119	137	81	368	530	548	50	684
95th Queue (ft)	130	1101	1123	1363	327	347	264	555	833	835	180	1022
Link Distance (ft)		989	989	989	1058	1058	1058		709	709		1367
Upstream Blk Time (%)		23	26	13					8	8		
Queuing Penalty (veh)		160	180	91					0	0		
Storage Bay Dist (ft)	105							590			150	
Storage Blk Time (%)	43	47						2	13	51	0	
Queuing Penalty (veh)	326	136						10	37	58	0	

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	NB	NB	SB	SB	B5
Directions Served	LT	R	L	TR	T
Maximum Queue (ft)	1196	795	93	119	162
Average Queue (ft)	758	229	41	116	84
95th Queue (ft)	1147	621	85	119	173
Link Distance (ft)	1367		113	113	822
Upstream Blk Time (%)				24	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)		770			
Storage Blk Time (%)	18	0			
Queuing Penalty (veh)	68	1			

Intersection: 15: SB 41 OFF &

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	388
Average Queue (ft)	209
95th Queue (ft)	369
Link Distance (ft)	336
Upstream Blk Time (%)	7
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	75
Average Queue (ft)	44
95th Queue (ft)	71
Link Distance (ft)	252
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 2405

Intersection: 3: Northland (CTH OO) & SB 41 OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	T	T	T	R	L	R	R
Maximum Queue (ft)	139	220	225	306	241	246	349	336	149
Average Queue (ft)	98	110	115	170	183	67	226	126	114
95th Queue (ft)	133	195	199	278	237	201	332	275	157
Link Distance (ft)		1103	1103	1128	1128		344		
Upstream Blk Time (%)							0	0	
Queuing Penalty (veh)							4	0	
Storage Bay Dist (ft)	1000					500		375	375
Storage Blk Time (%)							0	0	
Queuing Penalty (veh)							3	1	

Intersection: 6: Northland (CTH OO) & 41 NB ON

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	T	T	R	L	LT
Maximum Queue (ft)	94	115	157	136	616	654	365	118	135
Average Queue (ft)	72	81	80	96	298	400	104	62	89
95th Queue (ft)	100	115	155	164	549	627	376	115	131
Link Distance (ft)			1128	1128	1045	1045			1415
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	425	425					340	300	
Storage Blk Time (%)						6			
Queuing Penalty (veh)						5			

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	T	L
Maximum Queue (ft)	205	436	415	29	209	326	292	250	16	31	45	140
Average Queue (ft)	164	266	213	16	87	191	210	89	6	17	27	139
95th Queue (ft)	254	462	370	40	175	330	310	198	19	37	48	140
Link Distance (ft)		606	606			766	766			1911	1911	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	180			225	185			225	120			115
Storage Blk Time (%)	11	9	5			5	4	0				59
Queuing Penalty (veh)	65	20	2			14	13	0				80

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	431	387
Average Queue (ft)	285	246
95th Queue (ft)	409	395
Link Distance (ft)	1305	1305
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	L	LT	R	L	TR
Maximum Queue (ft)	129	340	374	104	615	694	430	274	287	70	77	142
Average Queue (ft)	59	250	274	43	473	317	292	186	211	38	54	122
95th Queue (ft)	135	361	406	126	636	614	493	316	304	68	83	136
Link Distance (ft)		981	981	981		704	704	1370	1370		113	113
Upstream Blk Time (%)						0						68
Queuing Penalty (veh)						0						0
Storage Bay Dist (ft)	105				590					770		
Storage Blk Time (%)	0	31			2		22					
Queuing Penalty (veh)	0	20			13		12					

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	B5
Directions Served	T
Maximum Queue (ft)	837
Average Queue (ft)	756
95th Queue (ft)	852
Link Distance (ft)	822
Upstream Blk Time (%)	6
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: SB 41 OFF &

Movement	SB
Directions Served	T
Maximum Queue (ft)	73
Average Queue (ft)	10
95th Queue (ft)	52
Link Distance (ft)	1082
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	320
Average Queue (ft)	293
95th Queue (ft)	339
Link Distance (ft)	286
Upstream Blk Time (%)	60
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 23: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	90
Average Queue (ft)	41
95th Queue (ft)	77
Link Distance (ft)	322
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 254

Intersection: 3: Northland (CTH OO) & SB 41 OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	L	T	T	T	T	R	L	R	R
Maximum Queue (ft)	207	74	72	358	336	56	181	252	254
Average Queue (ft)	144	41	50	216	204	8	119	185	183
95th Queue (ft)	197	77	76	360	330	39	154	248	251
Link Distance (ft)		1103	1103	1128	1128		344		
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	1000					500		375	375
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 6: Northland (CTH OO) & 41 NB ON

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	L	T	T	T	T	R	L	LT
Maximum Queue (ft)	159	160	266	288	553	610	365	239	285
Average Queue (ft)	84	97	136	144	313	334	52	102	115
95th Queue (ft)	170	170	275	278	607	636	263	146	178
Link Distance (ft)			1128	1128	1045	1045			1415
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	425	425					340	300	
Storage Blk Time (%)						9	0		0
Queuing Penalty (veh)						18	0		1

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	B17	B17	NB	NB
Directions Served	L	T	T	R	L	T	T	R	T	T	L	T
Maximum Queue (ft)	204	621	621	250	210	783	780	250	532	570	194	281
Average Queue (ft)	204	620	569	55	166	705	721	214	200	236	147	170
95th Queue (ft)	205	623	685	187	254	903	900	305	483	542	239	224
Link Distance (ft)		606	606			766	766		1103	1103		1913
Upstream Blk Time (%)		35	6			22	22					
Queuing Penalty (veh)		0	0			240	239					
Storage Bay Dist (ft)	180			225	185			225			120	
Storage Blk Time (%)	67	6	7		5	42	40	0			43	46
Queuing Penalty (veh)	449	29	7		43	139	112	1			69	51

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	NB	NB	SB	SB	SB
Directions Served	T	R	L	T	TR
Maximum Queue (ft)	207	63	140	685	706
Average Queue (ft)	182	20	140	511	500
95th Queue (ft)	222	60	140	718	735
Link Distance (ft)	1913	1913		1305	1305
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			115		
Storage Blk Time (%)			93	1	
Queuing Penalty (veh)			127	1	

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	EB	EB	EB	EB	B18	B18	B18	WB	WB	WB	WB	NB
Directions Served	L	T	T	R	T	T	T	L	T	T	R	L
Maximum Queue (ft)	129	1006	1012	1038	374	353	345	615	724	724	174	988
Average Queue (ft)	129	928	944	848	178	180	156	344	531	540	25	629
95th Queue (ft)	129	1147	1146	1422	432	428	403	426	829	837	125	907
Link Distance (ft)		989	989	989	1045	1045	1045		709	709		1367
Upstream Blk Time (%)		25	31	16					8	8		
Queuing Penalty (veh)		173	214	113					0	0		
Storage Bay Dist (ft)	105							590			150	
Storage Blk Time (%)	50	53						0	13	50		
Queuing Penalty (veh)	383	152						3	36	58		

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	NB	NB	SB	SB	B5
Directions Served	LT	R	L	TR	T
Maximum Queue (ft)	1186	795	93	119	162
Average Queue (ft)	692	230	41	116	88
95th Queue (ft)	1025	621	85	119	167
Link Distance (ft)	1367		113	113	822
Upstream Blk Time (%)				25	
Queuing Penalty (veh)				0	
Storage Bay Dist (ft)		770			
Storage Blk Time (%)	12	0			
Queuing Penalty (veh)	49	0			

Intersection: 15: SB 41 OFF &

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	388
Average Queue (ft)	209
95th Queue (ft)	369
Link Distance (ft)	336
Upstream Blk Time (%)	7
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 24: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	75
Average Queue (ft)	44
95th Queue (ft)	71
Link Distance (ft)	252
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 2706

Intersection: 3: Northland (CTH OO) & SB 41 OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	L	T	T	T	T	R	L	R
Maximum Queue (ft)	179	180	137	288	258	199	360	225
Average Queue (ft)	119	132	97	152	134	108	227	173
95th Queue (ft)	201	187	154	253	264	189	416	249
Link Distance (ft)		1932	1932	1132	1132		350	
Upstream Blk Time (%)							4	
Queuing Penalty (veh)							42	
Storage Bay Dist (ft)	250					350		200
Storage Blk Time (%)							6	6
Queuing Penalty (veh)							40	19

Intersection: 6: Northland (CTH OO) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	L	T	T	T	T	R	LT
Maximum Queue (ft)	424	638	477	387	555	354	367
Average Queue (ft)	248	256	202	242	376	51	242
95th Queue (ft)	475	607	399	431	561	255	343
Link Distance (ft)		1132	1132	2097	2097		1421
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	400					340	
Storage Blk Time (%)	4				10	0	
Queuing Penalty (veh)	23				9	0	

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	L	TR
Maximum Queue (ft)	205	621	621	244	154	2001	339	250	35	74	140	1321
Average Queue (ft)	169	589	587	81	90	457	219	113	12	36	105	1102
95th Queue (ft)	266	712	667	253	142	1500	347	257	30	79	172	1519
Link Distance (ft)		606	606			1932	1932			1911		1306
Upstream Blk Time (%)		20	13									22
Queuing Penalty (veh)		0	0									0
Storage Bay Dist (ft)	180			225	185			225	120		115	
Storage Blk Time (%)	0	48	43	0		3	4	0			19	48
Queuing Penalty (veh)	0	107	20	1		7	12	0			110	164

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	LT	R	L
Maximum Queue (ft)	67	258	291	56	615	743	724	170	158	238	58	74
Average Queue (ft)	33	194	217	8	598	638	550	24	81	128	28	35
95th Queue (ft)	69	258	287	40	664	980	980	123	160	239	64	66
Link Distance (ft)		2097	2097	2097		709	709		1366	1366		113
Upstream Blk Time (%)						29	2					
Queuing Penalty (veh)						0	0					
Storage Bay Dist (ft)	105				590			150			770	
Storage Blk Time (%)		43			55		24	0				
Queuing Penalty (veh)		28			293		14	0				

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	SB	B5
Directions Served	TR	T
Maximum Queue (ft)	187	550
Average Queue (ft)	183	320
95th Queue (ft)	194	463
Link Distance (ft)	113	822
Upstream Blk Time (%)	71	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: SB 41 OFF &

Movement	SB
Directions Served	T
Maximum Queue (ft)	183
Average Queue (ft)	63
95th Queue (ft)	190
Link Distance (ft)	1082
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 20: Int

Movement	NW
Directions Served	R
Maximum Queue (ft)	158
Average Queue (ft)	112
95th Queue (ft)	159
Link Distance (ft)	386
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 889

Intersection: 3: Northland (CTH OO) & SB 41 OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	L	T	T	T	T	R	L	R
Maximum Queue (ft)	268	2041	162	290	292	101	362	225
Average Queue (ft)	194	363	77	233	212	14	270	212
95th Queue (ft)	270	1495	144	293	283	73	488	261
Link Distance (ft)		1932	1932	1132	1132		350	
Upstream Blk Time (%)		1					9	
Queuing Penalty (veh)		6					91	
Storage Bay Dist (ft)	250					350		200
Storage Blk Time (%)	5							21
Queuing Penalty (veh)	41							43

Intersection: 6: Northland (CTH OO) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	392	206	205	280	294	56	590	525
Average Queue (ft)	278	116	110	227	243	8	501	75
95th Queue (ft)	413	239	223	278	304	40	619	378
Link Distance (ft)		1132	1132	2109	2109		1421	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	400					340		670
Storage Blk Time (%)	0							
Queuing Penalty (veh)	2							

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	204	640	637	250	210	1550	1604	250	163	569	131	140
Average Queue (ft)	204	625	541	83	188	1091	1133	140	94	406	51	136
95th Queue (ft)	204	637	764	254	229	1596	1622	293	161	706	122	149
Link Distance (ft)		606	606			1932	1932			1911	1911	
Upstream Blk Time (%)		51	7									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	180			225	185			225	120			115
Storage Blk Time (%)	62	18	9	0	18	47	49	0	11	49		58
Queuing Penalty (veh)	420	86	9	1	147	154	136	0	35	54		299

Intersection: 9: Northland (CTH OO) & Casaloma Dr.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	1321
Average Queue (ft)	794
95th Queue (ft)	1396
Link Distance (ft)	1306
Upstream Blk Time (%)	17
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	28
Queuing Penalty (veh)	61

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	LT	R	L
Maximum Queue (ft)	130	2171	1160	1111	459	591	650	175	1276	1382	795	73
Average Queue (ft)	120	1154	943	647	320	494	523	50	719	827	613	47
95th Queue (ft)	145	1859	1202	1346	489	638	676	180	1079	1189	1061	73
Link Distance (ft)		2109	2109	2109		709	709		1367	1367		113
Upstream Blk Time (%)										3		
Queuing Penalty (veh)										0		
Storage Bay Dist (ft)	105				590			150			770	
Storage Blk Time (%)	25	62				1	55			34	2	
Queuing Penalty (veh)	190	179				3	63			134	11	

Intersection: 12: Northland (CTH OO) & Bluemound Dr.

Movement	SB	B5
Directions Served	TR	T
Maximum Queue (ft)	187	54
Average Queue (ft)	143	8
95th Queue (ft)	209	39
Link Distance (ft)	113	822
Upstream Blk Time (%)	18	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: SB 41 OFF &

Movement	SB
Directions Served	T
Maximum Queue (ft)	806
Average Queue (ft)	108
95th Queue (ft)	302
Link Distance (ft)	1082
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 2165

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	141	152	173	143	31	44	170	184	62
Average Queue (ft)	80	89	108	64	4	13	103	119	7
95th Queue (ft)	145	149	174	125	22	39	162	177	38
Link Distance (ft)		780	780		457	457		1110	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	190			390			210		220
Storage Blk Time (%)	0	0					0	0	
Queuing Penalty (veh)	0	0					0	0	

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	239	65	72	218	176	684	69	114
Average Queue (ft)	118	20	20	125	97	149	27	14
95th Queue (ft)	207	61	65	192	157	554	61	75
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)						0		
Queuing Penalty (veh)						0		
Storage Bay Dist (ft)								220
Storage Blk Time (%)								0
Queuing Penalty (veh)								0

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	R	L	T	T
Maximum Queue (ft)	118	204	213	164	402	471	129	152	99	70	67	80
Average Queue (ft)	67	120	132	70	214	303	56	49	23	32	27	34
95th Queue (ft)	118	197	208	143	447	522	111	113	78	67	60	72
Link Distance (ft)		666	666		892	892	797	797			564	564
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	270			150					75	110		
Storage Blk Time (%)		0		0	10			3	0			2
Queuing Penalty (veh)		0		1	14			5	0			2

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	68
Average Queue (ft)	29
95th Queue (ft)	74
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	70
Storage Blk Time (%)	1
Queuing Penalty (veh)	0

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	32	139	145	61	134	160	35	34	52	99	31
Average Queue (ft)	9	82	84	27	54	74	14	7	22	48	9
95th Queue (ft)	30	137	139	58	114	140	32	26	41	91	30
Link Distance (ft)		558	558		780	780		275			291
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			210			600		135	90	
Storage Blk Time (%)		1	0							2	
Queuing Penalty (veh)		0	0							0	

Network Summary

Network wide Queuing Penalty: 23

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	204	246	241	67	312	94	115	234	770	244
Average Queue (ft)	133	148	160	8	157	43	54	177	303	122
95th Queue (ft)	205	218	228	44	285	87	99	255	717	268
Link Distance (ft)		780	780			457	457		1110	
Upstream Blk Time (%)									0	
Queuing Penalty (veh)									0	
Storage Bay Dist (ft)	190			270	390			210		220
Storage Blk Time (%)	1	1	0					4	8	0
Queuing Penalty (veh)	4	3	0					32	64	2

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	289	227	78	221	203	789	184	113
Average Queue (ft)	181	40	30	132	127	322	91	17
95th Queue (ft)	281	161	79	202	188	882	172	80
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)						2		
Queuing Penalty (veh)						10		
Storage Bay Dist (ft)								220
Storage Blk Time (%)							1	0
Queuing Penalty (veh)							1	0

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	R	L	T	T
Maximum Queue (ft)	266	294	292	174	911	926	239	157	84	129	94	140
Average Queue (ft)	199	192	199	85	900	906	135	66	13	68	44	53
95th Queue (ft)	322	307	296	186	941	944	229	137	64	117	83	118
Link Distance (ft)		666	666		892	892	797	797			564	564
Upstream Blk Time (%)					38	60						
Queuing Penalty (veh)					0	0						
Storage Bay Dist (ft)	270			150					75	110		
Storage Blk Time (%)	8	0	0	0	59			7	0	2	0	4
Queuing Penalty (veh)	26	1	0	1	76			6	0	2	0	12

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	92
Average Queue (ft)	61
95th Queue (ft)	98
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	70
Storage Blk Time (%)	2
Queuing Penalty (veh)	2

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	32	143	149	23	91	295	303	47	51	72	114	167
Average Queue (ft)	13	84	92	8	22	166	183	22	19	33	77	37
95th Queue (ft)	37	136	144	26	73	282	296	44	49	65	122	132
Link Distance (ft)		558	558			780	780		275			291
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	135			150	210			600		135	90	
Storage Blk Time (%)		1	1			3					7	
Queuing Penalty (veh)		0	0			1					3	

Network Summary

Network wide Queuing Penalty: 248

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	214	302	342	22	317	57	57	223	258	136
Average Queue (ft)	141	154	171	1	185	19	25	126	144	24
95th Queue (ft)	224	261	289	16	307	50	58	207	228	101
Link Distance (ft)		780	780			457	457		1110	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	190			270	390			210		220
Storage Blk Time (%)	4	1	0					0	1	0
Queuing Penalty (veh)	10	4	0					1	7	0

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	296	136	150	345	300	684	157	136
Average Queue (ft)	160	49	60	204	183	210	80	45
95th Queue (ft)	278	118	131	335	298	631	140	124
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)	0					1		
Queuing Penalty (veh)	0					2		
Storage Bay Dist (ft)							220	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	R	L	T
Maximum Queue (ft)	206	337	367	67	174	668	736	161	342	100	130	139
Average Queue (ft)	88	215	231	18	103	402	479	98	122	70	83	70
95th Queue (ft)	185	335	357	141	183	717	765	173	268	129	138	137
Link Distance (ft)		666	666			892	892	797	797			564
Upstream Blk Time (%)							0					
Queuing Penalty (veh)							0					
Storage Bay Dist (ft)	270			310	150					75	110	
Storage Blk Time (%)	0	2	2	0	3	23			18	3	6	1
Queuing Penalty (veh)	0	4	4	0	14	42			43	6	7	2

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	146	95
Average Queue (ft)	80	66
95th Queue (ft)	144	117
Link Distance (ft)	564	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		70
Storage Blk Time (%)	19	1
Queuing Penalty (veh)	28	1

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	36	184	195	18	83	167	173	52	38	56	106	48
Average Queue (ft)	16	121	126	1	38	78	93	18	9	28	56	10
95th Queue (ft)	39	186	191	10	79	155	167	41	32	49	103	39
Link Distance (ft)		558	558			780	780		275			291
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	135			150	210			600		135	90	
Storage Blk Time (%)		4	3			0					2	
Queuing Penalty (veh)		1	0			0					1	

Network Summary

Network wide Queuing Penalty: 178

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	141	152	173	143	31	44	170	184	62
Average Queue (ft)	80	89	108	64	4	13	103	119	7
95th Queue (ft)	145	149	174	125	22	39	162	177	38
Link Distance (ft)		780	780		457	457		1110	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	190			390			210		220
Storage Blk Time (%)	0	0					0	0	
Queuing Penalty (veh)	0	0					0	0	

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	239	65	72	218	176	684	69	114
Average Queue (ft)	118	20	20	125	97	149	27	14
95th Queue (ft)	207	61	65	192	157	554	61	75
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)						0		
Queuing Penalty (veh)						0		
Storage Bay Dist (ft)								220
Storage Blk Time (%)								0
Queuing Penalty (veh)								0

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	R	L	T	T
Maximum Queue (ft)	118	204	213	164	402	471	129	152	99	70	67	80
Average Queue (ft)	67	120	132	70	214	303	56	49	23	32	27	34
95th Queue (ft)	118	197	208	143	447	522	111	113	78	67	60	72
Link Distance (ft)		666	666		892	892	797	797			564	564
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	270			150					75	110		
Storage Blk Time (%)		0		0	10			3	0			2
Queuing Penalty (veh)		0		1	14			5	0			2

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	68
Average Queue (ft)	29
95th Queue (ft)	74
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	70
Storage Blk Time (%)	1
Queuing Penalty (veh)	0

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	32	139	145	61	134	160	35	34	52	99	31
Average Queue (ft)	9	82	84	27	54	74	14	7	22	48	9
95th Queue (ft)	30	137	139	58	114	140	32	26	41	91	30
Link Distance (ft)		558	558		780	780		275			291
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			210			600		135	90	
Storage Blk Time (%)		1	0							2	
Queuing Penalty (veh)		0	0							0	

Network Summary

Network wide Queuing Penalty: 23

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	214	321	262	304	52	113	235	1125	245
Average Queue (ft)	160	167	124	136	28	45	155	505	172
95th Queue (ft)	240	298	215	273	61	83	258	1108	343
Link Distance (ft)		780	780		457	457		1110	
Upstream Blk Time (%)								5	
Queuing Penalty (veh)								0	
Storage Bay Dist (ft)	190			390			210		220
Storage Blk Time (%)	6	2	0				0	23	0
Queuing Penalty (veh)	19	5	0				1	153	2

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	424	561	246	220	228	299	181	163
Average Queue (ft)	307	162	125	138	121	93	77	45
95th Queue (ft)	403	360	231	212	196	253	149	127
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)		0						
Queuing Penalty (veh)		2						
Storage Bay Dist (ft)								220
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	R	L	T	T
Maximum Queue (ft)	283	259	289	175	907	907	404	342	100	134	474	491
Average Queue (ft)	183	132	145	122	905	906	259	136	78	134	404	366
95th Queue (ft)	299	206	229	215	912	909	414	276	133	134	482	501
Link Distance (ft)		666	666		892	892	797	797			564	564
Upstream Blk Time (%)					29	40						
Queuing Penalty (veh)					0	0						
Storage Bay Dist (ft)	270			150					75	110		
Storage Blk Time (%)	0	0		1	48			22	5	75	24	67
Queuing Penalty (veh)	1	0		7	92			59	9	167	49	113

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	95
Average Queue (ft)	76
95th Queue (ft)	129
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	70
Storage Blk Time (%)	6
Queuing Penalty (veh)	14

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	160	174	172	67	141	146	58	25	66	112	68
Average Queue (ft)	29	99	76	35	57	60	28	7	30	67	25
95th Queue (ft)	93	155	144	57	125	123	55	24	52	101	58
Link Distance (ft)		558	558		780	780		275			291
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			210			600		135	90	
Storage Blk Time (%)		2	0							2	
Queuing Penalty (veh)		1	0							1	

Network Summary

Network wide Queuing Penalty: 692

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	215	776	746	295	403	236	184	234	1125	245
Average Queue (ft)	210	554	460	120	283	115	120	214	1057	210
95th Queue (ft)	232	904	830	334	410	203	171	273	1314	320
Link Distance (ft)		780	780			457	457		1110	
Upstream Blk Time (%)		3	2			0			15	
Queuing Penalty (veh)		22	12			0			0	
Storage Bay Dist (ft)	190			270	390			210		220
Storage Blk Time (%)	45	19	21	0	2			11	35	2
Queuing Penalty (veh)	175	75	53	0	13			107	340	17

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	405	402	134	456	414	789	564	245
Average Queue (ft)	296	131	83	317	270	553	295	127
95th Queue (ft)	399	318	141	490	421	1075	631	297
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)	0			0		4		
Queuing Penalty (veh)	0			1		23		
Storage Bay Dist (ft)								220
Storage Blk Time (%)							17	2
Queuing Penalty (veh)							56	4

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	R	L	T
Maximum Queue (ft)	294	400	326	67	174	907	919	817	813	100	134	324
Average Queue (ft)	213	180	162	4	80	895	906	744	715	53	120	159
95th Queue (ft)	329	362	290	68	174	943	921	913	986	128	160	339
Link Distance (ft)		666	666			892	892	797	797			564
Upstream Blk Time (%)						32	58	36	23			
Queuing Penalty (veh)						0	0	0	0			
Storage Bay Dist (ft)	270			310	150					75	110	
Storage Blk Time (%)	13	0	0		0	47			51	1	40	2
Queuing Penalty (veh)	52	0	1		2	78			63	2	44	5

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	255	95
Average Queue (ft)	122	84
95th Queue (ft)	254	109
Link Distance (ft)	564	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		70
Storage Blk Time (%)	21	8
Queuing Penalty (veh)	83	8

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	67	270	261	53	125	358	388	54	99	113	114	305
Average Queue (ft)	23	133	127	10	25	164	182	23	46	64	108	195
95th Queue (ft)	58	229	219	57	88	330	353	50	90	111	131	358
Link Distance (ft)		558	558			780	780		275			291
Upstream Blk Time (%)												7
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	135			150	210			600		135	90	
Storage Blk Time (%)		8	4	0		5				0	40	0
Queuing Penalty (veh)		2	1	0		2				0	34	1

Network Summary

Network wide Queuing Penalty: 1278

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	181	151	136	283	50	52	233	433	245
Average Queue (ft)	132	93	89	200	20	36	103	221	73
95th Queue (ft)	166	158	147	297	49	59	192	390	247
Link Distance (ft)		780	780		457	457		1110	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	190			390			210		220
Storage Blk Time (%)	0						0	7	0
Queuing Penalty (veh)	0						0	44	0

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	399	290	118	296	206	790	156	86
Average Queue (ft)	192	57	59	139	104	219	76	31
95th Queue (ft)	321	163	118	237	167	701	121	88
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)						1		
Queuing Penalty (veh)						4		
Storage Bay Dist (ft)								220
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	R	L	T	T
Maximum Queue (ft)	187	200	270	174	907	907	322	227	100	133	96	134
Average Queue (ft)	104	150	171	113	800	815	125	134	43	61	51	55
95th Queue (ft)	163	215	246	211	1055	1045	274	240	110	112	81	103
Link Distance (ft)		666	666		892	892	797	797			564	564
Upstream Blk Time (%)					18	20						
Queuing Penalty (veh)					0	0						
Storage Bay Dist (ft)	270			150					75	110		
Storage Blk Time (%)				1	47			16	0	1	0	6
Queuing Penalty (veh)				3	86			38	0	2	0	9

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	87
Average Queue (ft)	54
95th Queue (ft)	98
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	70
Storage Blk Time (%)	1
Queuing Penalty (veh)	1

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	28	243	222	64	64	83	37	49	63	114	204
Average Queue (ft)	17	115	107	34	29	39	13	15	27	77	39
95th Queue (ft)	37	216	188	58	62	79	27	38	55	131	136
Link Distance (ft)		558	558		780	780		275			291
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			210			600		135	90	
Storage Blk Time (%)		6	3							13	
Queuing Penalty (veh)		1	0							3	

Network Summary

Network wide Queuing Penalty: 192

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	215	729	696	294	306	106	110	234	1125	245
Average Queue (ft)	211	572	455	105	207	42	65	208	850	215
95th Queue (ft)	227	861	743	326	313	91	105	280	1408	317
Link Distance (ft)		780	780			457	457		1110	
Upstream Blk Time (%)		1	0						10	
Queuing Penalty (veh)		6	2						0	
Storage Bay Dist (ft)	190			270	390			210		220
Storage Blk Time (%)	49	26	22	0				6	29	4
Queuing Penalty (veh)	177	92	39	0				49	254	29

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	228	279	209	266	227	790	600	245
Average Queue (ft)	117	155	153	163	146	505	307	139
95th Queue (ft)	205	252	208	254	222	1097	613	300
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)						3		
Queuing Penalty (veh)						19		
Storage Bay Dist (ft)							220	
Storage Blk Time (%)							21	0
Queuing Penalty (veh)							63	1

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	R	L	T	T
Maximum Queue (ft)	294	418	399	174	918	920	542	361	100	134	179	239
Average Queue (ft)	185	194	194	88	892	899	283	143	44	86	69	83
95th Queue (ft)	328	383	349	180	967	954	544	353	120	144	150	187
Link Distance (ft)		666	666		892	892	797	797			564	564
Upstream Blk Time (%)					33	53						
Queuing Penalty (veh)					0	0						
Storage Bay Dist (ft)	270			150					75	110		
Storage Blk Time (%)	8	0	0	1	45			25	0	8	3	12
Queuing Penalty (veh)	30	1	0	4	65			30	0	8	6	42

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	95
Average Queue (ft)	73
95th Queue (ft)	111
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	70
Storage Blk Time (%)	5
Queuing Penalty (veh)	5

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	40	181	174	23	48	247	290	59	118	120	114	259
Average Queue (ft)	17	102	93	6	18	112	121	19	33	46	98	107
95th Queue (ft)	42	174	166	22	44	217	229	46	90	91	133	268
Link Distance (ft)		558	558			780	780		275			291
Upstream Blk Time (%)												1
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	135			150	210			600		135	90	
Storage Blk Time (%)		3	1			1				1	23	1
Queuing Penalty (veh)		1	0			1				0	17	2

Network Summary

Network wide Queuing Penalty: 943

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	192	222	185	11	229	54	78	214	712	245
Average Queue (ft)	83	77	82	1	104	5	17	120	270	64
95th Queue (ft)	172	170	156	11	207	28	61	220	625	217
Link Distance (ft)		780	780			457	457		1103	
Upstream Blk Time (%)									0	
Queuing Penalty (veh)									0	
Storage Bay Dist (ft)	190			270	390			210		220
Storage Blk Time (%)	1		0					0	10	0
Queuing Penalty (veh)	3		0					1	61	0

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	313	340	180	211	198	789	171	120
Average Queue (ft)	156	60	55	114	100	219	85	42
95th Queue (ft)	301	223	141	193	174	750	152	106
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)						1		
Queuing Penalty (veh)						2		
Storage Bay Dist (ft)							220	
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	R	L	T	T
Maximum Queue (ft)	131	259	272	174	908	919	201	324	100	134	160	161
Average Queue (ft)	73	147	167	105	877	891	109	153	61	76	68	80
95th Queue (ft)	126	237	261	202	1030	1014	187	315	129	135	131	145
Link Distance (ft)		666	666		892	892	797	797			564	564
Upstream Blk Time (%)					33	49						
Queuing Penalty (veh)					0	0						
Storage Bay Dist (ft)	270			150					75	110		
Storage Blk Time (%)		0	0	1	43			25	2	4	1	16
Queuing Penalty (veh)		0	0	4	78			60	3	5	1	23

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	95
Average Queue (ft)	59
95th Queue (ft)	116
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	70
Storage Blk Time (%)	1
Queuing Penalty (veh)	1

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	62	176	160	4	78	58	76	355	54	49	114	137
Average Queue (ft)	15	77	66	0	29	15	24	28	15	27	76	28
95th Queue (ft)	51	153	140	4	68	47	66	254	45	47	120	96
Link Distance (ft)		558	558			780	780	780	275			291
Upstream Blk Time (%)								0				
Queuing Penalty (veh)								0				
Storage Bay Dist (ft)	135			150	210					135	90	
Storage Blk Time (%)		1	0								10	
Queuing Penalty (veh)		0	0								3	

Network Summary

Network wide Queuing Penalty: 245

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	214	645	572	293	327	278	161	234	1123	245
Average Queue (ft)	205	441	350	68	139	68	81	218	1041	200
95th Queue (ft)	247	719	584	263	288	195	151	266	1328	340
Link Distance (ft)		780	780			457	457		1103	
Upstream Blk Time (%)		0				0			22	
Queuing Penalty (veh)		2				0			0	
Storage Bay Dist (ft)	190			270	390			210		220
Storage Blk Time (%)	36	15	14	0	0			9	43	0
Queuing Penalty (veh)	128	53	24	0	1			79	373	3

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	409	138	146	256	250	789	880	245
Average Queue (ft)	228	17	17	155	146	401	540	160
95th Queue (ft)	429	83	88	244	237	1012	1163	326
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)	0					2	3	
Queuing Penalty (veh)	3					14	0	
Storage Bay Dist (ft)								220
Storage Blk Time (%)							40	2
Queuing Penalty (veh)							122	5

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	R	L	T	T
Maximum Queue (ft)	278	242	266	174	917	911	732	743	100	134	214	252
Average Queue (ft)	136	68	88	81	900	906	466	340	53	95	84	92
95th Queue (ft)	253	184	197	185	937	914	876	795	129	150	188	207
Link Distance (ft)		666	666		892	892	797	797			564	564
Upstream Blk Time (%)					30	54	8	5				
Queuing Penalty (veh)					0	0	0	0				
Storage Bay Dist (ft)	270			150					75	110		
Storage Blk Time (%)	3			0	53			36	0	12	2	17
Queuing Penalty (veh)	10			2	77			44	0	12	5	60

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB
Directions Served	R
Maximum Queue (ft)	95
Average Queue (ft)	79
95th Queue (ft)	112
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	70
Storage Blk Time (%)	5
Queuing Penalty (veh)	5

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	40	213	187	27	46	142	319	60	72	100	114	303
Average Queue (ft)	14	88	78	6	14	44	70	19	38	47	108	179
95th Queue (ft)	38	179	159	22	39	116	244	48	73	84	124	345
Link Distance (ft)		558	558			780	780	780	275			291
Upstream Blk Time (%)							0					3
Queuing Penalty (veh)							0					0
Storage Bay Dist (ft)	135			150	210					135	90	
Storage Blk Time (%)		3	1			0					35	0
Queuing Penalty (veh)		1	0			0					26	1

Network Summary

Network wide Queuing Penalty: 1049

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	214	181	245	154	98	73	234	478	245
Average Queue (ft)	103	57	70	85	11	18	110	191	64
95th Queue (ft)	173	123	154	143	55	61	201	365	215
Link Distance (ft)		780	780		457	457		1103	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	190			390			210		220
Storage Blk Time (%)	1	0					1	7	0
Queuing Penalty (veh)	2	0					3	41	0

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	281	96	95	177	180	790	140	118
Average Queue (ft)	134	33	36	111	102	409	84	50
95th Queue (ft)	246	82	89	171	178	993	128	114
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)						2		
Queuing Penalty (veh)						9		
Storage Bay Dist (ft)								220
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	T	R	L	T
Maximum Queue (ft)	171	250	302	225	907	876	225	167	227	100	156	88
Average Queue (ft)	71	154	176	136	568	616	118	99	102	68	68	64
95th Queue (ft)	133	231	272	255	950	907	299	158	201	129	143	83
Link Distance (ft)		666	666		892	892		797	797			564
Upstream Blk Time (%)					0	0						
Queuing Penalty (veh)					0	0						
Storage Bay Dist (ft)	270			200			200			75	200	
Storage Blk Time (%)		0	0	0	36	56	0		15	5		
Queuing Penalty (veh)		0	0	0	66	67	1		36	8		

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	109	70
Average Queue (ft)	69	36
95th Queue (ft)	110	68
Link Distance (ft)	564	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	47	201	214	53	62	61	14	44	65	114	51
Average Queue (ft)	15	81	73	22	11	25	5	12	32	75	16
95th Queue (ft)	40	175	171	49	38	58	15	38	58	113	47
Link Distance (ft)		558	558		780	780	780	275			291
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	135			210					135	90	
Storage Blk Time (%)		3	2							6	
Queuing Penalty (veh)		1	0							2	

Network Summary

Network wide Queuing Penalty: 237

Intersection: 3: Winneconne Ave. & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	214	506	416	246	209	116	133	235	1118	245
Average Queue (ft)	193	298	241	45	83	23	45	212	1044	185
95th Queue (ft)	259	516	401	199	180	87	109	274	1336	340
Link Distance (ft)		780	780			457	457		1103	
Upstream Blk Time (%)									23	
Queuing Penalty (veh)									0	
Storage Bay Dist (ft)	190			270	390			210		220
Storage Blk Time (%)	21	6	4	0				10	43	0
Queuing Penalty (veh)	77	21	6	0				84	377	3

Intersection: 6: Winneconne Ave. & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	315	131	84	266	212	790	820	245
Average Queue (ft)	73	15	14	165	150	578	520	177
95th Queue (ft)	272	87	64	247	216	1120	1125	327
Link Distance (ft)	457	457	457	666	666	666	1343	
Upstream Blk Time (%)						4	1	
Queuing Penalty (veh)						24	0	
Storage Bay Dist (ft)								220
Storage Blk Time (%)							39	2
Queuing Penalty (veh)							118	4

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	T	R	L	T
Maximum Queue (ft)	197	190	196	161	910	916	225	670	672	100	179	112
Average Queue (ft)	116	84	102	81	883	906	107	416	295	46	104	57
95th Queue (ft)	206	167	179	179	976	915	290	777	716	122	182	102
Link Distance (ft)		666	666		892	892		797	797			564
Upstream Blk Time (%)					26	54		2	1			
Queuing Penalty (veh)					0	0		0	0			
Storage Bay Dist (ft)	270			150			200			75	200	
Storage Blk Time (%)	0			0	56	75	0		29	0	1	
Queuing Penalty (veh)	0			1	81	79	1		36	0	1	

Intersection: 9: Winneconne Ave. & Green Bay Rd.

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	114	82
Average Queue (ft)	67	52
95th Queue (ft)	113	79
Link Distance (ft)	564	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: Winneconne Ave. & Wal Mart Entrance (Westowne Pl)

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	R	L	TR
Maximum Queue (ft)	36	182	144	23	45	176	193	214	72	95	114	303
Average Queue (ft)	16	87	73	5	16	40	60	25	35	42	106	159
95th Queue (ft)	39	159	132	20	40	126	160	190	67	76	133	336
Link Distance (ft)		558	558			780	780	780	275			291
Upstream Blk Time (%)												9
Queuing Penalty (veh)												0
Storage Bay Dist (ft)	135			150	210					135	90	
Storage Blk Time (%)		2	0								44	1
Queuing Penalty (veh)		0	0								33	2

Network Summary

Network wide Queuing Penalty: 949

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	EB	WB	SB	SB	SB	SB
Directions Served	T	T	T	R	L	L	L	LT	R
Maximum Queue (ft)	245	132	116	55	24	159	177	196	132
Average Queue (ft)	181	87	92	23	0	115	130	150	68
95th Queue (ft)	256	123	114	58	0	169	183	195	130
Link Distance (ft)		498	498		577			945	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	450			300		475	475		300
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	LT	R	R
Maximum Queue (ft)	224	246	226	226	117	99	102
Average Queue (ft)	98	175	141	152	55	48	76
95th Queue (ft)	204	279	253	243	97	104	104
Link Distance (ft)		1030	1030	1030	958		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	500					350	350
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	T	R	LT	TR	L	LT	R
Maximum Queue (ft)	47	115	129	54	96	138	73	173	168	135	220	174
Average Queue (ft)	23	85	87	42	73	98	38	82	107	99	136	39
95th Queue (ft)	44	130	142	61	97	137	74	113	175	150	194	131
Link Distance (ft)		692	692		508	508		228	228	974	974	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	145			75			120					150
Storage Blk Time (%)			1		14	1					4	0
Queuing Penalty (veh)			0		18	2					2	0

Intersection: 19: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	395
Average Queue (ft)	391
95th Queue (ft)	394
Link Distance (ft)	375
Upstream Blk Time (%)	78
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 21

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB	SB
Directions Served	T	T	T	R	L	L	T	L	L	LT	R
Maximum Queue (ft)	426	442	485	30	24	48	28	241	245	265	159
Average Queue (ft)	199	211	257	4	3	16	4	207	216	234	78
95th Queue (ft)	373	377	432	22	18	44	20	248	263	280	105
Link Distance (ft)		498	498			577	577			945	
Upstream Blk Time (%)			0								
Queuing Penalty (veh)			1								
Storage Bay Dist (ft)	450			300	500			475	475		300
Storage Blk Time (%)		0	3								
Queuing Penalty (veh)		1	5								

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	T	T	T	LT	R	R
Maximum Queue (ft)	25	77	21	52	364	351	248	184	207	234
Average Queue (ft)	12	31	5	45	276	243	196	126	194	205
95th Queue (ft)	31	79	19	57	398	363	251	188	224	236
Link Distance (ft)		577	577	577	1030	1030	1030	958		
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	500								350	350
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	L	LT
Maximum Queue (ft)	169	439	435	155	99	181	158	145	152	238	243	310
Average Queue (ft)	98	338	334	46	74	97	95	78	110	156	174	247
95th Queue (ft)	177	413	422	157	113	180	143	126	147	249	237	350
Link Distance (ft)		692	692			508	508		228	228	974	974
Upstream Blk Time (%)										2		
Queuing Penalty (veh)										0		
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)		28	33	0	18	13	4	1				43
Queuing Penalty (veh)		32	16	0	54	23	16	4				24

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB
Directions Served	R
Maximum Queue (ft)	175
Average Queue (ft)	68
95th Queue (ft)	183
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 19: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	316
Average Queue (ft)	193
95th Queue (ft)	343
Link Distance (ft)	375
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 177

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB
Directions Served	T	T	T	R	L	T	T	LT
Maximum Queue (ft)	247	171	835	91	251	183	163	261
Average Queue (ft)	125	58	161	41	96	75	64	82
95th Queue (ft)	225	128	537	76	192	175	142	173
Link Distance (ft)		761	761	761	380	380	380	878
Upstream Blk Time (%)			0					
Queuing Penalty (veh)			0					
Storage Bay Dist (ft)	250							
Storage Blk Time (%)	0							1
Queuing Penalty (veh)	0							2

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	WB	WB	WB	WB
Directions Served	L	T	T	T	R
Maximum Queue (ft)	381	182	227	195	73
Average Queue (ft)	163	53	85	76	13
95th Queue (ft)	287	137	178	162	48
Link Distance (ft)	380		516	516	
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	1				
Storage Bay Dist (ft)		250			150
Storage Blk Time (%)				0	
Queuing Penalty (veh)				0	

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	EB	WB	WB	NB
Directions Served	T	T	T	T	L
Maximum Queue (ft)	147	228	180	160	263
Average Queue (ft)	46	78	83	77	145
95th Queue (ft)	104	164	154	138	238
Link Distance (ft)	516	516	402	402	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					200
Storage Blk Time (%)					3
Queuing Penalty (veh)					3

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	117	115	54	94	246	213	215	194
Average Queue (ft)	30	40	17	72	102	95	91	24
95th Queue (ft)	98	98	48	108	206	193	167	80
Link Distance (ft)	402	402			1049	1049	628	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			150	70				80
Storage Blk Time (%)				10	5		15	
Queuing Penalty (veh)				47	11		11	

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	T	R
Maximum Queue (ft)	154	307	414	225	374	822	190	202	78	114	178	41
Average Queue (ft)	49	192	205	121	241	311	84	94	20	61	74	1
95th Queue (ft)	107	267	326	240	390	584	155	182	60	109	132	14
Link Distance (ft)		1277	1277			761	761	761		670	670	
Upstream Blk Time (%)						0						
Queuing Penalty (veh)						0						
Storage Bay Dist (ft)	200			200	350				100			250
Storage Blk Time (%)		5	9	0	2	5		7				
Queuing Penalty (veh)		3	18	0	9	17		4				

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	SB	SB	SB	B15
Directions Served	L	T	TR	T
Maximum Queue (ft)	196	245	330	99
Average Queue (ft)	78	147	193	4
95th Queue (ft)	144	232	308	35
Link Distance (ft)		253	253	363
Upstream Blk Time (%)		0	3	
Queuing Penalty (veh)		0	0	
Storage Bay Dist (ft)	170			
Storage Blk Time (%)	1	5		
Queuing Penalty (veh)	2	7		

Network Summary

Network wide Queuing Penalty: 135

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB
Directions Served	T	T	T	R	L	T	T	LT
Maximum Queue (ft)	246	112	138	113	223	71	66	115
Average Queue (ft)	71	23	40	25	113	17	21	72
95th Queue (ft)	162	70	90	67	207	50	54	108
Link Distance (ft)		761	761	761	380	380	380	878
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	250							
Storage Blk Time (%)	0							
Queuing Penalty (veh)	0							

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	WB	WB	WB	WB
Directions Served	L	T	T	T	R
Maximum Queue (ft)	334	140	156	138	162
Average Queue (ft)	220	61	94	92	36
95th Queue (ft)	335	118	149	148	91
Link Distance (ft)	380		516	516	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		250			150
Storage Blk Time (%)				0	0
Queuing Penalty (veh)				0	1

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	EB	WB	WB	NB
Directions Served	T	T	T	T	L
Maximum Queue (ft)	72	95	158	141	245
Average Queue (ft)	27	47	84	72	113
95th Queue (ft)	64	83	146	129	192
Link Distance (ft)	516	516	402	402	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					200
Storage Blk Time (%)					1
Queuing Penalty (veh)					1

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	54	96	31	94	137	162	170	193
Average Queue (ft)	11	30	5	35	57	83	62	20
95th Queue (ft)	42	73	21	61	115	133	127	76
Link Distance (ft)	402	402			1049	1049	628	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			150	70				80
Storage Blk Time (%)				0	2		6	
Queuing Penalty (veh)				2	2		3	

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	R	L	L	T	T	R	L	T	L
Maximum Queue (ft)	87	336	358	225	353	563	228	266	150	93	154	111
Average Queue (ft)	35	179	167	61	153	181	91	107	23	48	49	54
95th Queue (ft)	82	275	285	145	262	336	186	194	84	86	107	97
Link Distance (ft)		1277	1277			761	761	761		670	670	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			200	350				100			170
Storage Blk Time (%)		6	6	0	0	0		8				
Queuing Penalty (veh)		2	8	0	1	1		3				

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	86	169
Average Queue (ft)	22	52
95th Queue (ft)	57	109
Link Distance (ft)	253	253
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 24

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	LT	R
Maximum Queue (ft)	274	710	72	472	441	881	264
Average Queue (ft)	188	211	32	254	310	234	104
95th Queue (ft)	296	480	59	519	515	738	267
Link Distance (ft)		755	755	385	385	880	
Upstream Blk Time (%)				4	16	13	
Queuing Penalty (veh)				19	85	0	
Storage Bay Dist (ft)	250						215
Storage Blk Time (%)	11	2					21
Queuing Penalty (veh)	41	8					16

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	WB	WB	WB
Directions Served	L	T	T	R
Maximum Queue (ft)	405	275	534	500
Average Queue (ft)	292	196	294	123
95th Queue (ft)	431	337	592	327
Link Distance (ft)	385		518	
Upstream Blk Time (%)	13		7	0
Queuing Penalty (veh)	51		77	0
Storage Bay Dist (ft)		250		450
Storage Blk Time (%)		6	18	
Queuing Penalty (veh)		36	112	

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	WB	NB
Directions Served	T	T	L
Maximum Queue (ft)	268	415	261
Average Queue (ft)	88	305	153
95th Queue (ft)	182	474	231
Link Distance (ft)	518	400	
Upstream Blk Time (%)		11	
Queuing Penalty (veh)		107	
Storage Bay Dist (ft)			200
Storage Blk Time (%)			2
Queuing Penalty (veh)			2

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	52	94	1061	669	205
Average Queue (ft)	2	36	265	294	52
95th Queue (ft)	19	82	877	687	180
Link Distance (ft)	400		1046	654	
Upstream Blk Time (%)			1	16	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)		70			80
Storage Blk Time (%)		1	13	70	0
Queuing Penalty (veh)		5	13	33	0

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	1159	1060	775	840	430	68	94	116	153	250
Average Queue (ft)	645	606	729	762	66	29	47	62	57	77
95th Queue (ft)	1077	1077	830	975	300	61	87	112	120	166
Link Distance (ft)	1287	1287	755	755		674	674			754
Upstream Blk Time (%)			14	40						
Queuing Penalty (veh)			79	224						
Storage Bay Dist (ft)					380			50	170	
Storage Blk Time (%)				6			16	9	0	1
Queuing Penalty (veh)				3			50	7	0	1

Network Summary

Network wide Queuing Penalty: 969

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB
Directions Served	T	T	T	R	L	T	T	LT
Maximum Queue (ft)	274	867	866	234	328	250	77	138
Average Queue (ft)	171	170	267	84	179	22	11	61
95th Queue (ft)	282	563	797	168	284	103	44	114
Link Distance (ft)		769	769	769	380	380	380	878
Upstream Blk Time (%)		0	1					
Queuing Penalty (veh)		1	5					
Storage Bay Dist (ft)	250							
Storage Blk Time (%)	1	0						
Queuing Penalty (veh)	3	1						

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	WB	WB	WB	WB
Directions Served	L	T	T	T	R
Maximum Queue (ft)	420	274	423	322	200
Average Queue (ft)	196	144	182	175	82
95th Queue (ft)	422	251	327	309	186
Link Distance (ft)	380		516	516	
Upstream Blk Time (%)	1				
Queuing Penalty (veh)	3				
Storage Bay Dist (ft)		250			150
Storage Blk Time (%)		0	1	10	
Queuing Penalty (veh)		1	4	14	

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	EB	WB	WB	NB
Directions Served	T	T	T	T	L
Maximum Queue (ft)	138	182	195	184	224
Average Queue (ft)	51	65	79	81	114
95th Queue (ft)	114	148	154	144	188
Link Distance (ft)	516	516	402	402	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					250
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	136	140	32	94	158	147	233	58
Average Queue (ft)	34	50	13	31	62	67	78	22
95th Queue (ft)	102	121	37	59	123	123	169	44
Link Distance (ft)	402	402			1049	1049	628	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			150	70				80
Storage Blk Time (%)		0		0	4		9	
Queuing Penalty (veh)		0		1	3		8	

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	T	R
Maximum Queue (ft)	224	354	310	225	199	199	112	111	110	196	174	79
Average Queue (ft)	80	195	186	59	116	130	47	60	13	75	76	8
95th Queue (ft)	161	297	293	140	186	203	98	109	48	136	141	41
Link Distance (ft)		1275	1275			769	769	769		670	670	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200			200	350				100			250
Storage Blk Time (%)		6	7	0				3	0			
Queuing Penalty (veh)		8	12	0				3	0			

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	155	60	98
Average Queue (ft)	58	20	36
95th Queue (ft)	102	48	73
Link Distance (ft)		741	741
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	170		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Network Summary

Network wide Queuing Penalty: 67

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	EB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	LT	R
Maximum Queue (ft)	275	770	806	471	442	117	254
Average Queue (ft)	251	502	406	345	347	54	49
95th Queue (ft)	314	933	981	571	529	109	165
Link Distance (ft)		755	755	385	385	880	
Upstream Blk Time (%)		13	11	12	27		
Queuing Penalty (veh)		103	88	60	134		
Storage Bay Dist (ft)	250						215
Storage Blk Time (%)	28	15					2
Queuing Penalty (veh)	172	91					2

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	EB	WB	WB	WB
Directions Served	L	T	T	T	R
Maximum Queue (ft)	422	445	275	540	500
Average Queue (ft)	344	74	245	430	62
95th Queue (ft)	455	322	331	709	261
Link Distance (ft)	385	385		518	
Upstream Blk Time (%)	17	1		37	0
Queuing Penalty (veh)	109	7		416	0
Storage Bay Dist (ft)			250		450
Storage Blk Time (%)			29	47	
Queuing Penalty (veh)			183	302	

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	WB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	162	418	349	890
Average Queue (ft)	96	332	256	351
95th Queue (ft)	168	530	456	890
Link Distance (ft)	518	400		1064
Upstream Blk Time (%)		44		
Queuing Penalty (veh)		424		
Storage Bay Dist (ft)			250	
Storage Blk Time (%)			53	
Queuing Penalty (veh)			55	

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	WB	WB	NB	NB
Directions Served	L	T	L	R
Maximum Queue (ft)	94	1080	669	205
Average Queue (ft)	31	690	584	42
95th Queue (ft)	92	1477	842	176
Link Distance (ft)		1046	654	
Upstream Blk Time (%)		43	70	
Queuing Penalty (veh)		0	0	
Storage Bay Dist (ft)	70			80
Storage Blk Time (%)	0	50	97	1
Queuing Penalty (veh)	0	32	88	1

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	1302	1326	770	816	430	689	689	125	136	127
Average Queue (ft)	1201	1202	671	666	51	93	547	125	67	57
95th Queue (ft)	1602	1612	921	1046	260	337	799	125	119	114
Link Distance (ft)	1287	1287	755	755		674	674			754
Upstream Blk Time (%)	64	63	26	30		0	16			
Queuing Penalty (veh)	0	0	110	128		0	0			
Storage Bay Dist (ft)					380			50	170	
Storage Blk Time (%)				5			26	65		
Queuing Penalty (veh)				4			199	107		

Network Summary

Network wide Queuing Penalty: 2814

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB
Directions Served	T	T	T	R	L	T	T	LT
Maximum Queue (ft)	274	842	866	156	395	76	101	182
Average Queue (ft)	174	172	291	72	248	14	21	76
95th Queue (ft)	301	539	842	140	382	48	70	150
Link Distance (ft)		769	769	769	380	380	380	878
Upstream Blk Time (%)			2		1			
Queuing Penalty (veh)			11		2			
Storage Bay Dist (ft)	250							
Storage Blk Time (%)	5	0						
Queuing Penalty (veh)	25	0						

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	WB	WB	WB	WB
Directions Served	L	T	T	T	R
Maximum Queue (ft)	380	275	527	460	200
Average Queue (ft)	175	217	291	260	108
95th Queue (ft)	362	336	493	422	226
Link Distance (ft)	380		516	516	
Upstream Blk Time (%)	1		0		
Queuing Penalty (veh)	5		3		
Storage Bay Dist (ft)		250			150
Storage Blk Time (%)		5	7	21	0
Queuing Penalty (veh)		18	24	33	0

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	T	T	T	L	R
Maximum Queue (ft)	98	141	248	235	243	56
Average Queue (ft)	43	62	78	73	145	4
95th Queue (ft)	96	125	176	150	227	25
Link Distance (ft)	516	516	402	402		1052
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)					250	
Storage Blk Time (%)					0	
Queuing Penalty (veh)					0	

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	T	T	R	L	T	T	L	R
Maximum Queue (ft)	142	183	175	93	183	180	171	126
Average Queue (ft)	64	77	25	53	88	99	97	47
95th Queue (ft)	134	146	79	80	161	166	160	100
Link Distance (ft)	402	402			1049	1049	628	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			150	70				80
Storage Blk Time (%)		1	0	2	7		23	3
Queuing Penalty (veh)		1	0	8	8		52	5

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	L	T	T	R	L	T	R
Maximum Queue (ft)	224	1290	1290	225	224	244	205	219	46	150	479	325
Average Queue (ft)	159	804	775	137	156	171	53	64	14	79	189	18
95th Queue (ft)	257	1254	1209	288	207	232	131	148	40	142	303	118
Link Distance (ft)		1275	1275			769	769	769		670	670	
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	200			200	350				100			250
Storage Blk Time (%)	2	58	58	0				5			1	
Queuing Penalty (veh)	9	93	120	1				5			9	

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	121	104	140
Average Queue (ft)	61	40	58
95th Queue (ft)	105	78	104
Link Distance (ft)		741	741
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	170		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 432

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	WB	WB	SB	SB
Directions Served	T	R	L	T	LT	R
Maximum Queue (ft)	396	77	169	71	128	175
Average Queue (ft)	151	28	86	13	61	83
95th Queue (ft)	350	68	160	53	120	177
Link Distance (ft)	762	762	385	385	865	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						215
Storage Blk Time (%)					0	0
Queuing Penalty (veh)					0	0

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	WB	WB
Directions Served	L	T	R
Maximum Queue (ft)	370	524	249
Average Queue (ft)	220	299	53
95th Queue (ft)	366	499	233
Link Distance (ft)	385	518	
Upstream Blk Time (%)	1	1	0
Queuing Penalty (veh)	3	6	0
Storage Bay Dist (ft)			460
Storage Blk Time (%)		2	
Queuing Penalty (veh)		2	

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	WB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	118	389	187	10
Average Queue (ft)	42	192	100	1
95th Queue (ft)	101	360	176	10
Link Distance (ft)	518	400		1064
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		4		
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			13	
Queuing Penalty (veh)			9	

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	8	44	65	184	86
Average Queue (ft)	1	16	6	86	34
95th Queue (ft)	6	45	61	204	104
Link Distance (ft)	400		1046	654	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		70			80
Storage Blk Time (%)		0	0	23	0
Queuing Penalty (veh)		0	0	11	0

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	307	276	481	344	48	83	94	115	124	130
Average Queue (ft)	204	169	311	142	12	31	45	69	59	53
95th Queue (ft)	313	280	516	328	38	69	89	114	115	114
Link Distance (ft)	1287	1287	762	762		684	684			758
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)					380			50	170	
Storage Blk Time (%)				0			17	12		0
Queuing Penalty (veh)				0			53	7		0

Network Summary

Network wide Queuing Penalty: 95

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	WB	WB	SB	SB
Directions Served	T	R	L	T	LT	R
Maximum Queue (ft)	739	736	305	177	114	64
Average Queue (ft)	505	337	204	26	54	11
95th Queue (ft)	814	792	310	120	107	52
Link Distance (ft)	762	762	385	385	865	
Upstream Blk Time (%)	2	1				
Queuing Penalty (veh)	10	6				
Storage Bay Dist (ft)						215
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	WB	WB
Directions Served	L	T	R
Maximum Queue (ft)	328	542	498
Average Queue (ft)	226	317	68
95th Queue (ft)	334	530	281
Link Distance (ft)	385	518	
Upstream Blk Time (%)	0	2	0
Queuing Penalty (veh)	0	19	0
Storage Bay Dist (ft)			460
Storage Blk Time (%)		3	0
Queuing Penalty (veh)		3	2

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	WB	NB
Directions Served	T	T	L
Maximum Queue (ft)	83	305	166
Average Queue (ft)	21	172	101
95th Queue (ft)	64	317	158
Link Distance (ft)	518	400	
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		2	
Storage Bay Dist (ft)			100
Storage Blk Time (%)			11
Queuing Penalty (veh)			6

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	19	48	28	216	136
Average Queue (ft)	2	21	3	103	44
95th Queue (ft)	12	49	30	216	130
Link Distance (ft)	400		1046	654	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		70			80
Storage Blk Time (%)		0	0	31	0
Queuing Penalty (veh)		0	0	22	0

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	540	512	283	237	35	110	397	125	128	138
Average Queue (ft)	373	324	162	130	13	49	182	117	58	55
95th Queue (ft)	632	587	274	221	30	101	401	146	120	112
Link Distance (ft)	1287	1287	762	762		684	684			758
Upstream Blk Time (%)							0			
Queuing Penalty (veh)							0			
Storage Bay Dist (ft)					380			50	170	
Storage Blk Time (%)							13	39	1	0
Queuing Penalty (veh)							81	39	1	0

Network Summary

Network wide Queuing Penalty: 190

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	WB	WB	SB	SB
Directions Served	T	R	L	T	LT	R
Maximum Queue (ft)	767	719	231	296	907	265
Average Queue (ft)	562	368	140	106	883	264
95th Queue (ft)	891	899	221	308	897	268
Link Distance (ft)	762	762	385	385	865	
Upstream Blk Time (%)	5	4		0	79	
Queuing Penalty (veh)	25	20		2	0	
Storage Bay Dist (ft)						215
Storage Blk Time (%)						88
Queuing Penalty (veh)						90

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	EB	WB	WB
Directions Served	L	T	T	R
Maximum Queue (ft)	402	51	549	510
Average Queue (ft)	350	3	525	232
95th Queue (ft)	457	51	561	613
Link Distance (ft)	385	385	518	
Upstream Blk Time (%)	11		11	0
Queuing Penalty (veh)	58		176	0
Storage Bay Dist (ft)				460
Storage Blk Time (%)			14	0
Queuing Penalty (veh)			18	4

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	WB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	192	417	199	434
Average Queue (ft)	117	408	160	169
95th Queue (ft)	208	417	236	586
Link Distance (ft)	518	400		1064
Upstream Blk Time (%)		28		
Queuing Penalty (veh)		376		
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			45	0
Queuing Penalty (veh)			48	0

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	18	94	1080	674	82
Average Queue (ft)	1	40	1062	660	8
95th Queue (ft)	9	95	1071	679	74
Link Distance (ft)	400		1046	654	
Upstream Blk Time (%)			35	100	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)		70			80
Storage Blk Time (%)		0	36	100	
Queuing Penalty (veh)		6	46	56	

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	1322	1325	775	821	353	124	319	125	156	204
Average Queue (ft)	1184	1182	680	622	76	52	118	100	85	93
95th Queue (ft)	1558	1558	809	922	331	108	282	148	173	185
Link Distance (ft)	1287	1287	762	762		684	684			758
Upstream Blk Time (%)	45	42	5	8						
Queuing Penalty (veh)	0	0	42	64						
Storage Bay Dist (ft)					380			50	170	
Storage Blk Time (%)				3			29	28	5	3
Queuing Penalty (veh)				2			111	28	9	3

Network Summary

Network wide Queuing Penalty: 1185

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	WB	WB	SB	SB
Directions Served	T	R	L	T	LT	R
Maximum Queue (ft)	802	816	318	404	832	265
Average Queue (ft)	751	750	164	345	469	226
95th Queue (ft)	834	933	316	520	1031	336
Link Distance (ft)	762	762	385	385	865	
Upstream Blk Time (%)	14	15	0	18	23	
Queuing Penalty (veh)	132	139	2	92	0	
Storage Bay Dist (ft)						215
Storage Blk Time (%)					1	67
Queuing Penalty (veh)					1	79

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	WB	WB
Directions Served	L	T	R
Maximum Queue (ft)	343	539	510
Average Queue (ft)	242	529	371
95th Queue (ft)	366	552	717
Link Distance (ft)	385	518	
Upstream Blk Time (%)	0	34	1
Queuing Penalty (veh)	0	459	0
Storage Bay Dist (ft)			460
Storage Blk Time (%)		42	7
Queuing Penalty (veh)		60	72

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	WB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	83	420	199	856
Average Queue (ft)	29	404	190	453
95th Queue (ft)	72	443	225	1057
Link Distance (ft)	518	400		1064
Upstream Blk Time (%)		42		9
Queuing Penalty (veh)		423		0
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			77	0
Queuing Penalty (veh)			93	0

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	4	94	1068	665	137
Average Queue (ft)	0	31	750	610	39
95th Queue (ft)	5	82	1399	812	167
Link Distance (ft)	400		1046	654	
Upstream Blk Time (%)			28	81	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)		70			80
Storage Blk Time (%)		0	46	98	2
Queuing Penalty (veh)		1	32	218	2

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	1323	1317	792	833	273	696	708	125	202	123
Average Queue (ft)	1301	1300	763	784	43	197	692	125	95	61
95th Queue (ft)	1333	1339	817	895	214	612	747	125	206	118
Link Distance (ft)	1287	1287	762	762		684	684			758
Upstream Blk Time (%)	80	73	40	47		0	35			
Queuing Penalty (veh)	0	0	207	238		0	0			
Storage Bay Dist (ft)					380			50	170	
Storage Blk Time (%)				4			19	76	8	0
Queuing Penalty (veh)				3			169	148	11	0

Network Summary

Network wide Queuing Penalty: 2580

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	WB	WB	SB	SB
Directions Served	T	R	L	T	LT	R
Maximum Queue (ft)	676	584	318	399	907	265
Average Queue (ft)	424	137	176	249	882	264
95th Queue (ft)	696	459	307	420	895	267
Link Distance (ft)	762	762	385	385	865	
Upstream Blk Time (%)	0		0	4	82	
Queuing Penalty (veh)	1		0	27	0	
Storage Bay Dist (ft)						215
Storage Blk Time (%)					0	90
Queuing Penalty (veh)					0	99

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	EB	WB	WB
Directions Served	L	T	T	R
Maximum Queue (ft)	385	42	551	510
Average Queue (ft)	283	3	528	246
95th Queue (ft)	418	42	567	640
Link Distance (ft)	385	385	518	
Upstream Blk Time (%)	1		19	0
Queuing Penalty (veh)	9		297	0
Storage Bay Dist (ft)				460
Storage Blk Time (%)			23	0
Queuing Penalty (veh)			31	0

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	WB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	161	417	199	614
Average Queue (ft)	85	406	182	380
95th Queue (ft)	153	421	231	984
Link Distance (ft)	518	400		1064
Upstream Blk Time (%)		29		1
Queuing Penalty (veh)		379		0
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			61	0
Queuing Penalty (veh)			73	1

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	33	94	1078	662	123
Average Queue (ft)	5	68	1057	654	8
95th Queue (ft)	23	117	1131	667	74
Link Distance (ft)	400		1046	654	
Upstream Blk Time (%)			34	100	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)		70			80
Storage Blk Time (%)		4	36	100	0
Queuing Penalty (veh)		46	91	85	0

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	1336	1343	782	834	279	148	381	125	319	782
Average Queue (ft)	1306	1312	744	728	37	70	145	107	137	774
95th Queue (ft)	1349	1359	819	948	211	138	305	150	314	781
Link Distance (ft)	1287	1287	762	762		684	684			758
Upstream Blk Time (%)	74	71	15	22						65
Queuing Penalty (veh)	0	0	122	178						0
Storage Bay Dist (ft)					380			50	170	
Storage Blk Time (%)				2			37	24	1	71
Queuing Penalty (veh)				2			172	35	7	106

Network Summary

Network wide Queuing Penalty: 1760

Intersection: 3: CTH BB (Prospect Ave.) & 41 SB OFF

Movement	EB	EB	WB	WB	SB	SB
Directions Served	T	R	L	T	LT	R
Maximum Queue (ft)	805	816	267	402	880	265
Average Queue (ft)	673	491	163	340	682	262
95th Queue (ft)	846	981	278	520	1111	275
Link Distance (ft)	762	762	385	385	865	
Upstream Blk Time (%)	4	4		20	43	
Queuing Penalty (veh)	39	40		110	0	
Storage Bay Dist (ft)						215
Storage Blk Time (%)					0	89
Queuing Penalty (veh)					1	76

Intersection: 6: CTH BB (Prospect Ave.) & 41 NB ON

Movement	EB	WB	WB
Directions Served	L	T	R
Maximum Queue (ft)	272	554	510
Average Queue (ft)	106	531	350
95th Queue (ft)	217	549	708
Link Distance (ft)	385	518	
Upstream Blk Time (%)		44	1
Queuing Penalty (veh)		641	0
Storage Bay Dist (ft)			460
Storage Blk Time (%)		52	
Queuing Penalty (veh)		84	

Intersection: 9: CTH BB (Prospect Ave.) & 41 NB OFF

Movement	EB	WB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	265	417	199	1082
Average Queue (ft)	166	406	195	965
95th Queue (ft)	265	416	210	1418
Link Distance (ft)	518	400		1064
Upstream Blk Time (%)		50		67
Queuing Penalty (veh)		543		0
Storage Bay Dist (ft)			100	
Storage Blk Time (%)			91	0
Queuing Penalty (veh)			124	1

Intersection: 11: CTH BB (Prospect Ave.) & Northern Rd.

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	9	94	1071	671	82
Average Queue (ft)	1	44	992	657	8
95th Queue (ft)	9	101	1310	681	74
Link Distance (ft)	400		1046	654	
Upstream Blk Time (%)			48	100	
Queuing Penalty (veh)			0	0	
Storage Bay Dist (ft)		70			80
Storage Blk Time (%)		1	55	100	0
Queuing Penalty (veh)		9	71	237	0

Intersection: 13: CTH BB (Prospect Ave.) & Nicolet Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	TR	L	T	R	L	T	R	L	TR
Maximum Queue (ft)	1314	1317	780	828	50	588	710	125	169	230
Average Queue (ft)	1303	1302	750	741	17	189	685	124	96	128
95th Queue (ft)	1313	1317	851	990	44	580	748	138	193	219
Link Distance (ft)	1287	1287	762	762		684	684			758
Upstream Blk Time (%)	75	66	42	31		0	19			
Queuing Penalty (veh)	0	0	261	193		0	0			
Storage Bay Dist (ft)					380			50	170	
Storage Blk Time (%)				0			50	59	6	4
Queuing Penalty (veh)				0			521	241	16	5

Network Summary

Network wide Queuing Penalty: 3213

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	135	127	48	222	238	224	182	173	75
Average Queue (ft)	100	74	31	130	158	180	115	114	50
95th Queue (ft)	158	123	60	210	238	246	185	172	88
Link Distance (ft)	1066	1066			583	583		955	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			140	500			210		225
Storage Blk Time (%)		0							
Queuing Penalty (veh)		0							

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	L	T	T	T	T	R	LT
Maximum Queue (ft)	160	136	182	380	279	272	72
Average Queue (ft)	92	31	34	221	153	77	52
95th Queue (ft)	160	108	136	356	266	225	81
Link Distance (ft)		583	583	2045	2045		973
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	500					340	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	L	LT
Maximum Queue (ft)	48	153	140	19	99	243	266	145	89	84	155	154
Average Queue (ft)	24	75	59	3	66	130	149	96	47	56	86	90
95th Queue (ft)	53	144	127	14	105	201	218	179	93	87	139	172
Link Distance (ft)		692	692			1066	1066		228	228	974	974
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)		0	1		8	30	16	1				5
Queuing Penalty (veh)		0	0		20	26	33	3				2

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB
Directions Served	R
Maximum Queue (ft)	21
Average Queue (ft)	11
95th Queue (ft)	28
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	279	420	223	50	264	694	774	42	134	226	113	49
Average Queue (ft)	246	276	134	33	123	518	534	11	128	96	89	16
95th Queue (ft)	332	456	216	51	273	733	818	27	151	251	124	45
Link Distance (ft)		2045	2045	2045		996	996			879	879	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	255				240			465	110			205
Storage Blk Time (%)	25					38	15		33			
Queuing Penalty (veh)	56					53	6		21			

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	90	263
Average Queue (ft)	34	120
95th Queue (ft)	84	232
Link Distance (ft)	800	800
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 219

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	274	268	154	306	223	221	234	564	240
Average Queue (ft)	187	206	37	189	174	178	217	315	102
95th Queue (ft)	275	307	119	343	268	246	244	574	257
Link Distance (ft)	1066	1066			583	583		955	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			140	500			210		225
Storage Blk Time (%)		17	0				5	12	0
Queuing Penalty (veh)		25	0				34	87	1

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB
Directions Served	L	T	T	T	T	R	LT
Maximum Queue (ft)	156	144	163	266	169	81	221
Average Queue (ft)	82	99	104	186	95	12	152
95th Queue (ft)	146	146	163	277	163	58	216
Link Distance (ft)		583	583	2045	2045		973
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	500					340	
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	L	LT
Maximum Queue (ft)	128	175	211	19	100	156	1140	145	109	146	183	196
Average Queue (ft)	71	130	139	13	70	110	258	84	72	85	113	135
95th Queue (ft)	128	184	226	26	107	174	854	148	122	149	164	187
Link Distance (ft)		692	692			1066	1066		228	228	974	974
Upstream Blk Time (%)							1					
Queuing Penalty (veh)							5					
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)	0	7	9		9	17	7	0				8
Queuing Penalty (veh)	0	6	3		19	17	23	0				4

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB
Directions Served	R
Maximum Queue (ft)	40
Average Queue (ft)	23
95th Queue (ft)	44
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	279	1359	1344	1190	264	434	316	44	134	457	177	178
Average Queue (ft)	160	878	910	780	248	264	160	17	113	173	109	65
95th Queue (ft)	299	1276	1302	1323	309	474	290	40	155	446	193	149
Link Distance (ft)		2045	2045	2045		996	996			879	879	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	255				240			465	110			205
Storage Blk Time (%)	0	50			38				35	0		
Queuing Penalty (veh)	0	125			91				27	0		

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	115	132
Average Queue (ft)	85	121
95th Queue (ft)	116	147
Link Distance (ft)	800	800
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 468

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	WB	SB	SB	SB
Directions Served	T	T	R	L	L	LT	R
Maximum Queue (ft)	426	280	133	23	202	204	94
Average Queue (ft)	216	148	77	3	168	148	57
95th Queue (ft)	287	254	132	17	218	196	101
Link Distance (ft)	503	503		587		955	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			300		475		300
Storage Blk Time (%)		0					
Queuing Penalty (veh)		0					

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	WB	WB	NB	NB
Directions Served	L	T	T	LT	R
Maximum Queue (ft)	180	312	275	96	87
Average Queue (ft)	129	230	192	66	36
95th Queue (ft)	177	339	317	98	91
Link Distance (ft)	587	2044	2044	960	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					350
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	L	LT
Maximum Queue (ft)	70	166	140	31	31	119	118	46	180	160	118	156
Average Queue (ft)	33	101	98	9	21	80	78	24	90	93	99	122
95th Queue (ft)	80	151	150	32	44	127	133	51	176	147	138	160
Link Distance (ft)		692	692			508	508		227	227	974	974
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)		3	2			8	1					7
Queuing Penalty (veh)		1	0			10	3					3

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB
Directions Served	R
Maximum Queue (ft)	31
Average Queue (ft)	31
95th Queue (ft)	31
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	280	650	569	55	117	1011	1001	489	134	894	870	96
Average Queue (ft)	272	409	236	37	94	660	642	102	134	893	201	62
95th Queue (ft)	302	651	513	56	142	922	950	363	134	894	654	99
Link Distance (ft)		2044	2044	2044		996	996			879	879	
Upstream Blk Time (%)						1	1			81	0	
Queuing Penalty (veh)						0	0			0	0	
Storage Bay Dist (ft)	255				240			465	110			205
Storage Blk Time (%)	67	0				54	21		90	0		
Queuing Penalty (veh)	161	0				86	23		126	2		

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	164	221
Average Queue (ft)	106	182
95th Queue (ft)	182	220
Link Distance (ft)	800	800
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	409
Average Queue (ft)	393
95th Queue (ft)	404
Link Distance (ft)	375
Upstream Blk Time (%)	79
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 414

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	B16	B16	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	534	528	319	515	515	52	50	31	499	970	325
Average Queue (ft)	514	515	46	482	484	13	7	13	473	888	209
95th Queue (ft)	529	528	230	586	590	37	36	38	533	1105	373
Link Distance (ft)	502	502		508	508	587	587	587		955	
Upstream Blk Time (%)	57	56		22	27					12	
Queuing Penalty (veh)	458	447		174	216					0	
Storage Bay Dist (ft)			300						475		300
Storage Blk Time (%)		61	0						8	50	0
Queuing Penalty (veh)		100	1						74	451	1

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	EB	EB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	T	LT	R	R
Maximum Queue (ft)	50	53	53	357	321	264	214	170
Average Queue (ft)	25	48	39	260	219	154	158	142
95th Queue (ft)	50	59	54	349	316	254	207	177
Link Distance (ft)	587	587	587	2043	2043	958		
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)							350	350
Storage Blk Time (%)					0			
Queuing Penalty (veh)					0			

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	B15	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	T	L
Maximum Queue (ft)	170	707	707	31	99	140	116	139	222	227	96	348
Average Queue (ft)	48	593	604	4	81	68	83	77	134	188	14	285
95th Queue (ft)	136	818	806	22	108	128	120	142	206	231	70	341
Link Distance (ft)		692	692			508	508		227	227	758	974
Upstream Blk Time (%)		37	36						1	7		
Queuing Penalty (veh)		0	0						0	0		
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)		69	72		24	13	4	1				
Queuing Penalty (veh)		79	35		73	23	15	3				

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	430	175
Average Queue (ft)	341	81
95th Queue (ft)	434	183
Link Distance (ft)	974	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)	64	0
Queuing Penalty (veh)	36	0

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	280	1508	1506	1512	264	1012	934	74	134	894	894	229
Average Queue (ft)	252	997	1022	697	264	977	721	35	134	845	564	108
95th Queue (ft)	326	1575	1588	1610	264	1114	1174	62	134	1024	1081	208
Link Distance (ft)		2043	2043	2043		996	996			879	879	
Upstream Blk Time (%)						54				62	13	
Queuing Penalty (veh)						0				0	0	
Storage Bay Dist (ft)	255				240			465	110			205
Storage Blk Time (%)	14	41			89	0			93	1		
Queuing Penalty (veh)	124	134			257	1			149	2		

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	285	312
Average Queue (ft)	204	258
95th Queue (ft)	291	333
Link Distance (ft)	800	800
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	3	
Queuing Penalty (veh)	5	

Intersection: 19: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	177
Average Queue (ft)	119
95th Queue (ft)	174
Link Distance (ft)	375
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 2858

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	EB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	L	LT	R
Maximum Queue (ft)	355	143	142	68	25	248	202	114
Average Queue (ft)	188	74	56	19	4	191	131	64
95th Queue (ft)	255	129	102	59	18	238	191	121
Link Distance (ft)		500	500		584		946	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	450			300		475		300
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	LT	R	R
Maximum Queue (ft)	158	280	198	189	96	85	53
Average Queue (ft)	135	128	120	121	66	34	8
95th Queue (ft)	163	242	183	189	98	87	38
Link Distance (ft)		2043	2043	2043	958		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	500					350	350
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	L	LT
Maximum Queue (ft)	94	166	141	31	72	119	118	50	180	160	139	156
Average Queue (ft)	39	95	98	9	31	83	81	27	90	93	102	119
95th Queue (ft)	91	149	157	32	63	132	133	58	176	147	146	164
Link Distance (ft)		692	692			508	508		227	227	974	974
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)		3	2		0	8	1					7
Queuing Penalty (veh)		2	0		1	10	2					3

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB
Directions Served	R
Maximum Queue (ft)	53
Average Queue (ft)	37
95th Queue (ft)	53
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	280	650	563	56	264	643	658	486	134	894	894	96
Average Queue (ft)	272	414	232	37	183	450	479	162	134	894	406	58
95th Queue (ft)	301	657	513	56	337	628	636	498	134	894	1036	99
Link Distance (ft)		2043	2043	2043		996	996			879	879	
Upstream Blk Time (%)										83	1	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)	255				240			465	110			205
Storage Blk Time (%)	68					31	13	0	90	0		
Queuing Penalty (veh)	161					50	15	1	125	2		

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	184	205
Average Queue (ft)	109	179
95th Queue (ft)	192	215
Link Distance (ft)	796	796
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	409
Average Queue (ft)	393
95th Queue (ft)	404
Link Distance (ft)	375
Upstream Blk Time (%)	79
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 370

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	L	T	L	LT	R
Maximum Queue (ft)	434	378	355	325	30	29	30	499	961	325
Average Queue (ft)	325	280	281	96	4	8	9	466	699	218
95th Queue (ft)	431	360	370	330	22	30	31	558	1095	372
Link Distance (ft)		500	500			584	584		946	
Upstream Blk Time (%)									6	
Queuing Penalty (veh)									0	
Storage Bay Dist (ft)	450			300	500			475		300
Storage Blk Time (%)	0		3	0				4	41	0
Queuing Penalty (veh)	0		4	0				38	374	3

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	T	T	T	LT	R	R
Maximum Queue (ft)	29	53	75	53	244	229	240	290	373	340
Average Queue (ft)	24	44	29	29	180	150	162	196	184	150
95th Queue (ft)	33	59	64	49	238	269	232	311	238	196
Link Distance (ft)		584	584	584	2043	2043	2043	958		
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	500								350	350
Storage Blk Time (%)									1	0
Queuing Penalty (veh)									2	0

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	B15	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	T	L
Maximum Queue (ft)	95	511	524	31	100	273	202	145	222	227	53	370
Average Queue (ft)	61	406	431	13	87	115	124	115	132	173	8	302
95th Queue (ft)	93	501	525	38	113	236	208	163	210	252	38	352
Link Distance (ft)		692	692			508	508		227	227	758	974
Upstream Blk Time (%)									2	5		
Queuing Penalty (veh)									0	0		
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)		41	44		37	23	16	1				
Queuing Penalty (veh)		47	22		111	40	61	3				

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	434	175
Average Queue (ft)	355	77
95th Queue (ft)	449	183
Link Distance (ft)	974	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)	72	
Queuing Penalty (veh)	40	

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	280	2044	2114	2097	264	1046	1007	94	134	894	894	229
Average Queue (ft)	207	1399	1414	1221	264	956	562	40	134	845	383	92
95th Queue (ft)	295	2273	2275	2449	264	1141	1203	95	134	1024	927	189
Link Distance (ft)		2043	2043	2043		996	996			879	879	
Upstream Blk Time (%)		4	9	7		44	0			59	13	
Queuing Penalty (veh)		39	86	67		0	0			0	0	
Storage Bay Dist (ft)	255				240			465	110			205
Storage Blk Time (%)		51			90	0			92	0		
Queuing Penalty (veh)		165			260	1			148	1		

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	246	297
Average Queue (ft)	188	253
95th Queue (ft)	242	320
Link Distance (ft)	796	796
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	5	
Queuing Penalty (veh)	8	

Intersection: 19: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	177
Average Queue (ft)	119
95th Queue (ft)	174
Link Distance (ft)	375
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1522

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	EB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	L	LT	R
Maximum Queue (ft)	355	108	142	56	25	202	206	94
Average Queue (ft)	179	59	67	22	4	163	155	58
95th Queue (ft)	258	102	93	55	18	208	214	104
Link Distance (ft)		500	500		584		946	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	450			300		475		300
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	LT	R	R
Maximum Queue (ft)	158	280	198	189	96	136	98
Average Queue (ft)	110	128	120	124	66	84	22
95th Queue (ft)	159	242	182	197	98	160	81
Link Distance (ft)		2043	2043	2043	958		
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	500					350	350
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	L	LT
Maximum Queue (ft)	94	166	140	31	72	137	118	50	180	160	139	156
Average Queue (ft)	39	98	95	9	34	86	81	27	90	93	102	119
95th Queue (ft)	91	153	155	32	69	143	133	57	176	147	146	164
Link Distance (ft)		692	692			508	508		227	227	974	974
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)		3	2		0	8	2					7
Queuing Penalty (veh)		2	0		1	10	5					3

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB
Directions Served	R
Maximum Queue (ft)	53
Average Queue (ft)	37
95th Queue (ft)	53
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	650	228	242	93	264	643	658	486	134	894	894	96
Average Queue (ft)	416	135	143	42	183	450	479	162	134	894	406	58
95th Queue (ft)	606	232	241	79	337	628	636	498	134	894	1036	99
Link Distance (ft)	2043	2043	2043	2043		996	996			878	878	
Upstream Blk Time (%)										83	1	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)					240			465	110			205
Storage Blk Time (%)						31	13	0	90	0		
Queuing Penalty (veh)						50	15	1	125	2		

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	184	205
Average Queue (ft)	109	179
95th Queue (ft)	192	215
Link Distance (ft)	796	796
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 19: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	409
Average Queue (ft)	393
95th Queue (ft)	404
Link Distance (ft)	375
Upstream Blk Time (%)	79
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 212

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	R	L	L	T	L	LT	R
Maximum Queue (ft)	313	359	438	316	30	29	30	499	961	325
Average Queue (ft)	267	283	331	45	4	16	9	468	781	247
95th Queue (ft)	311	378	452	227	22	40	31	527	1132	396
Link Distance (ft)		500	500			584	584		946	
Upstream Blk Time (%)									11	
Queuing Penalty (veh)									0	
Storage Bay Dist (ft)	450			300	500			475		300
Storage Blk Time (%)			11	0				4	46	0
Queuing Penalty (veh)			17	0				40	417	4

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	T	T	T	LT	R	R
Maximum Queue (ft)	29	24	53	53	290	281	244	290	262	232
Average Queue (ft)	20	9	47	43	182	168	164	194	218	191
95th Queue (ft)	37	27	57	61	272	324	254	314	261	217
Link Distance (ft)		584	584	584	2043	2043	2043	958		
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	500								350	350
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	B15	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	T	L
Maximum Queue (ft)	169	447	500	155	99	234	219	141	219	227	53	392
Average Queue (ft)	80	389	409	30	90	106	101	76	135	173	8	318
95th Queue (ft)	150	468	488	117	116	218	186	135	218	252	38	377
Link Distance (ft)		692	692			508	508		227	227	758	974
Upstream Blk Time (%)									0	5		
Queuing Penalty (veh)									0	0		
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)	0	37	44		43	15	5	1				
Queuing Penalty (veh)	0	43	22		130	27	19	3				

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB	SB
Directions Served	LT	R
Maximum Queue (ft)	435	56
Average Queue (ft)	361	33
95th Queue (ft)	451	71
Link Distance (ft)	974	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		150
Storage Blk Time (%)	74	
Queuing Penalty (veh)	42	

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	1539	1573	1620	1689	264	1046	1007	54	134	894	889	229
Average Queue (ft)	1011	1102	1125	995	264	957	731	35	134	842	463	104
95th Queue (ft)	1749	1732	1757	1906	264	1148	1243	65	134	1032	1070	202
Link Distance (ft)	2043	2043	2043	2043		996	996			878	878	
Upstream Blk Time (%)						47	1			61	6	
Queuing Penalty (veh)						0	0			0	0	
Storage Bay Dist (ft)					240			465	110			205
Storage Blk Time (%)					90	1			93	1		
Queuing Penalty (veh)					259	2			150	2		

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	269	297
Average Queue (ft)	194	259
95th Queue (ft)	261	318
Link Distance (ft)	796	796
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	7	
Queuing Penalty (veh)	11	

Intersection: 19: Int

Movement	WB
Directions Served	R
Maximum Queue (ft)	177
Average Queue (ft)	119
95th Queue (ft)	174
Link Distance (ft)	375
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 1186

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	134	109	65	271	222	205	235	926	250
Average Queue (ft)	98	57	37	141	160	164	213	351	101
95th Queue (ft)	143	97	63	266	223	216	251	729	265
Link Distance (ft)	1067	1067		588	588	588		957	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			140				210		225
Storage Blk Time (%)							14	23	0
Queuing Penalty (veh)							81	131	0

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	R	LT	R
Maximum Queue (ft)	250	27	379	299	223	112	43
Average Queue (ft)	153	6	193	161	137	61	6
95th Queue (ft)	235	23	321	281	260	119	31
Link Distance (ft)	588	588	2044	2044		949	949
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					340		
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	L	LT
Maximum Queue (ft)	91	132	109	19	52	72	116	112	111	123	112	150
Average Queue (ft)	46	71	64	7	34	45	68	33	73	79	69	118
95th Queue (ft)	86	114	121	21	62	79	100	59	128	129	108	151
Link Distance (ft)		692	692			1067	1067		228	228	974	974
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)		0				4	0	0				0
Queuing Penalty (veh)		0				5	0	1				0

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB
Directions Served	R
Maximum Queue (ft)	20
Average Queue (ft)	14
95th Queue (ft)	28
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	279	758	723	51	264	1011	1011	490	134	894	894	68
Average Queue (ft)	261	426	318	31	60	897	895	290	134	894	429	47
95th Queue (ft)	309	799	747	45	84	1136	1142	664	134	894	1086	74
Link Distance (ft)		2044	2044	2044		996	996			878	878	
Upstream Blk Time (%)						17	20			83	2	
Queuing Penalty (veh)						0	0			0	0	
Storage Bay Dist (ft)	255				240			465	110			205
Storage Blk Time (%)	55					57	48	0	88	0		
Queuing Penalty (veh)	132					91	54	0	123	0		

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	132	236
Average Queue (ft)	85	147
95th Queue (ft)	132	202
Link Distance (ft)	800	800
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 619

Intersection: 3: CTH CE (College Ave.) & 441 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	1110	1082	158	395	385	419	234	972	250
Average Queue (ft)	1027	1020	67	278	271	278	232	972	148
95th Queue (ft)	1182	1167	165	379	375	388	236	972	342
Link Distance (ft)	1067	1067		588	588	588		957	
Upstream Blk Time (%)	15	21						23	
Queuing Penalty (veh)	117	169						0	
Storage Bay Dist (ft)			140				210		225
Storage Blk Time (%)		64	0				21	34	0
Queuing Penalty (veh)		105	1				189	308	1

Intersection: 6: CTH CE (College Ave.) & 441 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	135	373	482	370	343	55	217	77
Average Queue (ft)	89	217	251	259	206	8	161	28
95th Queue (ft)	134	342	423	392	334	40	215	74
Link Distance (ft)	588	588	588	2044	2044		949	949
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)						340		
Storage Blk Time (%)					0			
Queuing Penalty (veh)					1			

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	LT	TR	L	LT
Maximum Queue (ft)	169	707	707	155	100	321	337	145	218	281	448	564
Average Queue (ft)	86	458	454	47	93	200	207	81	106	155	310	348
95th Queue (ft)	173	762	769	160	110	384	406	158	206	252	456	490
Link Distance (ft)		692	692			1067	1067		228	228	974	974
Upstream Blk Time (%)		17	18						0	5		
Queuing Penalty (veh)		0	0						0	0		
Storage Bay Dist (ft)	145			130	75			120				
Storage Blk Time (%)	0	50	58		29	13	11	0				61
Queuing Penalty (veh)	0	58	28		86	22	43	1				34

Intersection: 9: CTH CE (College Ave.) & Kensington Dr.

Movement	SB
Directions Served	R
Maximum Queue (ft)	175
Average Queue (ft)	66
95th Queue (ft)	180
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	150
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	279	1288	1268	1237	264	1011	1007	66	134	827	719	134
Average Queue (ft)	194	729	763	390	264	873	605	30	134	464	273	88
95th Queue (ft)	355	1203	1211	1095	264	1220	1219	57	134	715	593	139
Link Distance (ft)		2044	2044	2044		996	996			878	878	
Upstream Blk Time (%)						33	1					
Queuing Penalty (veh)						0	0					
Storage Bay Dist (ft)	255				240			465	110			205
Storage Blk Time (%)	0	37			88				91	4		
Queuing Penalty (veh)	1	120			253				146	12		

Intersection: 12: CTH CE (College Ave.) & Eisenhower Dr.

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	372	412
Average Queue (ft)	227	264
95th Queue (ft)	372	403
Link Distance (ft)	800	800
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	8	
Queuing Penalty (veh)	12	

Network Summary

Network wide Queuing Penalty: 1705

Intersection: 3: 41 SB ON & CTH E (Ballard Rd.)

Movement	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	T	T	T	R
Maximum Queue (ft)	158	133	72	49	29	359	324	94
Average Queue (ft)	81	74	47	7	4	231	163	32
95th Queue (ft)	142	115	76	35	21	338	280	96
Link Distance (ft)		768		514	514	1088	1088	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	210		210					410
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: 41 NB OFF & CTH E (Ballard Rd.)

Movement	EB	EB	EB	NB	NB	NB	SB	SB
Directions Served	L	LT	R	T	T	R	L	T
Maximum Queue (ft)	195	158	75	141	139	53	27	46
Average Queue (ft)	101	119	51	110	95	8	11	10
95th Queue (ft)	186	169	72	162	151	38	33	39
Link Distance (ft)		745		974	974		514	514
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	410		155			280		
Storage Blk Time (%)		1						
Queuing Penalty (veh)		7						

Intersection: 9: Capitol Dr. & CTH E (Ballard Rd.)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	723	284	116	54	48	135	149	194	265	153
Average Queue (ft)	593	93	61	39	7	96	103	130	83	55
95th Queue (ft)	791	289	108	58	26	158	161	205	221	132
Link Distance (ft)	708		626			820	820		974	974
Upstream Blk Time (%)	35									
Queuing Penalty (veh)	0									
Storage Bay Dist (ft)		135		135	120			120		
Storage Blk Time (%)	84		0			2		18	0	
Queuing Penalty (veh)	25		0			1		54	0	

Intersection: 12: Evergreen Dr. & CTH E (Ballard Rd.)

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	TR	L	T	T
Maximum Queue (ft)	160	155	181	222	31	139	155
Average Queue (ft)	134	119	101	147	30	89	78
95th Queue (ft)	175	164	168	216	32	135	149
Link Distance (ft)	1206	1206	1088	1088		709	709
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					135		
Storage Blk Time (%)						1	
Queuing Penalty (veh)						1	

Network Summary

Network wide Queuing Penalty: 88

Intersection: 3: 41 SB ON & CTH E (Ballard Rd.)

Movement	WB	WB	WB	NB	SB	SB	SB
Directions Served	L	LT	R	L	T	T	R
Maximum Queue (ft)	110	89	47	66	351	316	114
Average Queue (ft)	62	54	22	33	305	204	53
95th Queue (ft)	112	89	48	67	375	356	131
Link Distance (ft)		768		514	1088	1088	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	210		210				410
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 6: 41 NB OFF & CTH E (Ballard Rd.)

Movement	EB	EB	EB	NB	NB	NB	SB
Directions Served	L	LT	R	T	T	R	L
Maximum Queue (ft)	161	152	54	207	182	76	73
Average Queue (ft)	99	105	17	141	136	24	32
95th Queue (ft)	145	153	50	200	194	72	73
Link Distance (ft)		745		974	974		514
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	410		155			280	
Storage Blk Time (%)		2					
Queuing Penalty (veh)		9					

Intersection: 9: Capitol Dr. & CTH E (Ballard Rd.)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	224	30	52	111	48	129	172	112	83	43
Average Queue (ft)	124	26	35	61	31	89	101	48	24	21
95th Queue (ft)	217	43	63	104	49	137	164	94	71	48
Link Distance (ft)	708		626			820	820		974	974
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)		135		135	120			120		
Storage Blk Time (%)	11					2		0		
Queuing Penalty (veh)	7					1		1		

Intersection: 12: Evergreen Dr. & CTH E (Ballard Rd.)

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	TR	L	T	T
Maximum Queue (ft)	226	212	92	94	53	116	136
Average Queue (ft)	147	161	57	77	31	91	94
95th Queue (ft)	238	240	87	99	48	126	141
Link Distance (ft)	1206	1206	1088	1088		709	709
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					135		
Storage Blk Time (%)						0	
Queuing Penalty (veh)						0	

Network Summary

Network wide Queuing Penalty: 18

Intersection: 3: 41 SB ON & CTH E (Ballard Rd.)

Movement	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	R	L	T	T	T	R
Maximum Queue (ft)	161	169	203	214	48	30	1136	1149	435
Average Queue (ft)	115	112	171	176	7	4	1044	1069	372
95th Queue (ft)	188	190	215	212	35	21	1230	1257	622
Link Distance (ft)		768			514	514	1088	1088	
Upstream Blk Time (%)							19	16	
Queuing Penalty (veh)							178	151	
Storage Bay Dist (ft)	210		300	300					410
Storage Blk Time (%)								45	0
Queuing Penalty (veh)								216	2

Intersection: 6: 41 NB OFF & CTH E (Ballard Rd.)

Movement	EB	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	R	T	T	R	L	T	T
Maximum Queue (ft)	249	286	226	185	380	506	293	49	29	50
Average Queue (ft)	184	199	151	129	253	280	28	24	8	11
95th Queue (ft)	236	264	225	197	396	474	58	54	29	43
Link Distance (ft)		745			969	969		514	514	514
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	500		300	300			280			
Storage Blk Time (%)		0				4	0			
Queuing Penalty (veh)		1				12	0			

Intersection: 9: Capitol Dr. & CTH E (Ballard Rd.)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	373	182	135	139	51	332	378	474	510	228
Average Queue (ft)	321	86	76	55	20	277	313	263	125	146
95th Queue (ft)	394	170	123	117	51	341	387	465	239	243
Link Distance (ft)		708	626			826	826		969	969
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	350			135	120			400		
Storage Blk Time (%)	6		0	1		32		10		
Queuing Penalty (veh)	10		1	1		11		49		

Intersection: 12: Evergreen Dr. & CTH E (Ballard Rd.)

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	TR	L	T	T
Maximum Queue (ft)	926	919	1036	1090	159	550	528
Average Queue (ft)	454	473	764	826	88	337	319
95th Queue (ft)	749	810	1063	1071	170	578	545
Link Distance (ft)	1206	1206	1088	1088		709	709
Upstream Blk Time (%)				1			
Queuing Penalty (veh)				5			
Storage Bay Dist (ft)					135		
Storage Blk Time (%)					4	33	
Queuing Penalty (veh)					24	29	

Network Summary

Network wide Queuing Penalty: 690

Intersection: 3: 41 SB ON & CTH E (Ballard Rd.)

Movement	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	R	L	T	T	T	T	R
Maximum Queue (ft)	93	90	268	247	68	416	477	1044	1088	183
Average Queue (ft)	72	60	153	149	38	177	199	913	929	60
95th Queue (ft)	95	88	239	218	75	391	440	1116	1162	164
Link Distance (ft)		768			514	514	514	1088	1088	
Upstream Blk Time (%)									0	
Queuing Penalty (veh)									0	
Storage Bay Dist (ft)	210		300	300						410
Storage Blk Time (%)									26	
Queuing Penalty (veh)									106	

Intersection: 6: 41 NB OFF & CTH E (Ballard Rd.)

Movement	EB	EB	EB	EB	NB	NB	NB	SB
Directions Served	L	LT	R	R	T	T	R	L
Maximum Queue (ft)	574	760	375	188	973	992	305	71
Average Queue (ft)	558	695	155	81	813	815	182	24
95th Queue (ft)	597	863	390	162	1217	1249	417	66
Link Distance (ft)		745			969	969		514
Upstream Blk Time (%)		16			2	8		
Queuing Penalty (veh)		0			12	65		
Storage Bay Dist (ft)	500		300	300			280	
Storage Blk Time (%)	16	68				50	0	
Queuing Penalty (veh)	103	423				155	0	

Intersection: 9: Capitol Dr. & CTH E (Ballard Rd.)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	353	136	72	135	54	404	439	151	215	196
Average Queue (ft)	200	40	38	76	31	262	298	99	100	110
95th Queue (ft)	294	109	73	139	60	397	415	142	205	210
Link Distance (ft)		708	626			826	826		969	969
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	350			135	120			250		
Storage Blk Time (%)	1			2		27				
Queuing Penalty (veh)	1			1		21				

Intersection: 12: Evergreen Dr. & CTH E (Ballard Rd.)

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	TR	L	T	T
Maximum Queue (ft)	786	828	1128	1110	159	204	218
Average Queue (ft)	532	554	1020	1043	104	166	143
95th Queue (ft)	818	804	1335	1270	183	215	209
Link Distance (ft)	1206	1206	1088	1088		709	709
Upstream Blk Time (%)			8	14			
Queuing Penalty (veh)			78	144			
Storage Bay Dist (ft)					135		
Storage Blk Time (%)						12	
Queuing Penalty (veh)						15	

Network Summary

Network wide Queuing Penalty: 1124

Intersection: 3: 41 SB ON & CTH E (Ballard Rd.)

Movement	WB	WB	WB	WB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	R	R	L	T	T	T	T	R
Maximum Queue (ft)	183	155	201	228	49	30	371	384	378	134
Average Queue (ft)	127	126	173	194	13	4	294	298	302	30
95th Queue (ft)	195	169	204	245	41	22	380	379	391	105
Link Distance (ft)		768			514	514		1088	1088	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	210		300	300			450			410
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 6: 41 NB OFF & CTH E (Ballard Rd.)

Movement	EB	EB	EB	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	R	T	T	T	R	L	T	T
Maximum Queue (ft)	314	302	202	184	200	210	224	54	50	28	50
Average Queue (ft)	190	203	140	127	110	157	166	24	28	4	11
95th Queue (ft)	277	284	214	181	187	202	225	61	54	20	42
Link Distance (ft)		745				968	968		514	514	514
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	500		300	300	200			280			
Storage Blk Time (%)		0			0	1					
Queuing Penalty (veh)		2			0	2					

Intersection: 9: Capitol Dr. & CTH E (Ballard Rd.)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	374	612	116	95	145	336	358	474	856	589
Average Queue (ft)	367	298	74	55	44	274	305	348	309	227
95th Queue (ft)	382	735	110	95	121	326	376	487	783	481
Link Distance (ft)		708	626			826	826		968	968
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	350			135	120			400		
Storage Blk Time (%)	37		0			34		14		
Queuing Penalty (veh)	62		0			12		70		

Intersection: 12: Evergreen Dr. & CTH E (Ballard Rd.)

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	TR	L	T	T
Maximum Queue (ft)	332	410	1028	1096	138	328	338
Average Queue (ft)	296	313	693	774	89	235	235
95th Queue (ft)	344	393	1059	1118	151	323	315
Link Distance (ft)	1206	1206	1088	1088		709	709
Upstream Blk Time (%)				1			
Queuing Penalty (veh)				9			
Storage Bay Dist (ft)					135		
Storage Blk Time (%)					6	19	
Queuing Penalty (veh)					39	16	

Network Summary

Network wide Queuing Penalty: 212

Intersection: 3: 41 SB ON & CTH E (Ballard Rd.)

Movement	WB	WB	WB	WB	NB	NB	NB	SB	SB	SB	SB
Directions Served	L	LT	R	R	L	T	T	T	T	T	R
Maximum Queue (ft)	92	113	266	290	572	567	534	319	290	303	70
Average Queue (ft)	65	74	163	165	111	236	245	251	227	230	38
95th Queue (ft)	91	106	243	255	424	557	555	318	302	314	82
Link Distance (ft)		767			513	513	513		1088	1088	
Upstream Blk Time (%)					3	1	3				
Queuing Penalty (veh)					19	10	23				
Storage Bay Dist (ft)	210		300	300				450			410
Storage Blk Time (%)				0							
Queuing Penalty (veh)				0							

Intersection: 6: 41 NB OFF & CTH E (Ballard Rd.)

Movement	EB	EB	EB	EB	NB	NB	NB	NB	SB
Directions Served	L	LT	R	R	T	T	T	R	L
Maximum Queue (ft)	575	754	375	161	224	980	970	305	119
Average Queue (ft)	540	617	242	79	178	578	600	207	32
95th Queue (ft)	611	779	501	147	232	1019	1028	392	98
Link Distance (ft)		739				968	968		513
Upstream Blk Time (%)		4				1	4		
Queuing Penalty (veh)		0				7	30		
Storage Bay Dist (ft)	500		300	300	200			280	
Storage Blk Time (%)	12	63			7	47	39	0	
Queuing Penalty (veh)	76	397			31	196	121	1	

Intersection: 9: Capitol Dr. & CTH E (Ballard Rd.)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	288	136	91	135	144	328	317	193	152	210
Average Queue (ft)	188	48	43	73	51	262	295	110	86	110
95th Queue (ft)	263	112	81	142	123	336	344	200	170	213
Link Distance (ft)		708	626			826	826		968	968
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	350			135	120			250		
Storage Blk Time (%)				2		22				
Queuing Penalty (veh)				1		17				

Intersection: 12: Evergreen Dr. & CTH E (Ballard Rd.)

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	TR	L	T	T
Maximum Queue (ft)	680	718	1141	1110	159	204	199
Average Queue (ft)	505	515	1011	1055	105	157	142
95th Queue (ft)	711	706	1294	1153	182	228	200
Link Distance (ft)	1206	1206	1088	1088		709	709
Upstream Blk Time (%)			11	11			
Queuing Penalty (veh)			108	106			
Storage Bay Dist (ft)					135		
Storage Blk Time (%)						10	
Queuing Penalty (veh)						13	

Network Summary

Network wide Queuing Penalty: 1155

Intersection: 3: 41 SB ON & CTH E (Ballard Rd.)

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	T	T	T	T	R
Maximum Queue (ft)	207	446	284	48	70	75	1141	1116	435
Average Queue (ft)	149	164	204	16	18	41	1040	1035	378
95th Queue (ft)	201	315	285	48	64	90	1214	1210	600
Link Distance (ft)		768		514	514	514	1088	1088	
Upstream Blk Time (%)							15	22	
Queuing Penalty (veh)							145	211	
Storage Bay Dist (ft)	210		210						410
Storage Blk Time (%)	0		9					45	0
Queuing Penalty (veh)	3		32					215	2

Intersection: 6: 41 NB OFF & CTH E (Ballard Rd.)

Movement	EB	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	T	T	R	L	T	T
Maximum Queue (ft)	336	380	230	267	382	304	50	29	30
Average Queue (ft)	204	226	185	202	241	73	28	7	9
95th Queue (ft)	329	394	280	278	383	231	43	26	31
Link Distance (ft)		745		969	969		514	514	514
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	410		155			280			
Storage Blk Time (%)		27	10		2				
Queuing Penalty (veh)		181	44		6				

Intersection: 9: Capitol Dr. & CTH E (Ballard Rd.)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	440	207	135	96	31	314	341	194	612	525
Average Queue (ft)	389	94	70	63	21	267	303	191	363	329
95th Queue (ft)	473	186	124	103	43	313	343	202	537	506
Link Distance (ft)	708	708	626			826	826		969	969
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)				135	120			120		
Storage Blk Time (%)			2			36		54	15	
Queuing Penalty (veh)			3			13		265	73	

Intersection: 12: Evergreen Dr. & CTH E (Ballard Rd.)

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	TR	L	T	T
Maximum Queue (ft)	905	941	1159	1153	159	724	724
Average Queue (ft)	423	447	849	916	120	392	404
95th Queue (ft)	773	795	1418	1427	188	781	762
Link Distance (ft)	1206	1206	1088	1088		709	709
Upstream Blk Time (%)			1	3		2	2
Queuing Penalty (veh)			7	25		0	0
Storage Bay Dist (ft)					135		
Storage Blk Time (%)					10	32	
Queuing Penalty (veh)					60	28	

Network Summary

Network wide Queuing Penalty: 1314

Intersection: 3: 41 SB ON & CTH E (Ballard Rd.)

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	LT	R	L	T	T	T	T	R
Maximum Queue (ft)	92	91	173	69	167	175	1164	1120	435
Average Queue (ft)	59	80	98	34	7	24	903	865	327
95th Queue (ft)	90	98	159	68	37	64	1173	1167	611
Link Distance (ft)		768		514	514	514	1088	1088	
Upstream Blk Time (%)							1	4	
Queuing Penalty (veh)							5	32	
Storage Bay Dist (ft)	210		210						410
Storage Blk Time (%)								36	0
Queuing Penalty (veh)								146	1

Intersection: 6: 41 NB OFF & CTH E (Ballard Rd.)

Movement	EB	EB	EB	NB	NB	NB	SB
Directions Served	L	LT	R	T	T	R	L
Maximum Queue (ft)	484	760	230	986	979	305	71
Average Queue (ft)	483	759	141	818	807	146	17
95th Queue (ft)	486	761	304	1225	1227	366	57
Link Distance (ft)		745		969	969		514
Upstream Blk Time (%)		33		4	5		
Queuing Penalty (veh)		0		33	35		
Storage Bay Dist (ft)	410		155			280	
Storage Blk Time (%)	33	72	8		47	0	
Queuing Penalty (veh)	205	448	61		145	1	

Intersection: 9: Capitol Dr. & CTH E (Ballard Rd.)

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	LT	R	L	T	TR	L	T	TR
Maximum Queue (ft)	266	156	72	124	145	372	457	133	158	155
Average Queue (ft)	177	56	35	60	42	262	295	105	130	123
95th Queue (ft)	261	129	69	130	117	369	443	141	169	153
Link Distance (ft)	708	708	626			826	826		969	969
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)				135	120			120		
Storage Blk Time (%)				0		25		5	14	
Queuing Penalty (veh)				0		19		25	31	

Intersection: 12: Evergreen Dr. & CTH E (Ballard Rd.)

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	LR	T	TR	L	T	T
Maximum Queue (ft)	785	848	1151	1160	74	204	205
Average Queue (ft)	540	556	709	847	54	148	144
95th Queue (ft)	793	827	1272	1371	79	199	219
Link Distance (ft)	1206	1206	1088	1088		709	709
Upstream Blk Time (%)			1	5			
Queuing Penalty (veh)			9	55			
Storage Bay Dist (ft)					135		
Storage Blk Time (%)						5	
Queuing Penalty (veh)						6	

Network Summary

Network wide Queuing Penalty: 1257

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	216	93	192	48	71	159	157	98
Average Queue (ft)	108	37	76	19	32	78	86	41
95th Queue (ft)	190	74	144	42	62	140	140	78
Link Distance (ft)	899	899		230	230		1209	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300			500		500
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	141	97	92	168	66	87	464	305
Average Queue (ft)	54	40	40	62	23	21	172	68
95th Queue (ft)	127	97	81	127	57	65	338	152
Link Distance (ft)		230	230	234	234	234	884	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	300							285
Storage Blk Time (%)							4	
Queuing Penalty (veh)							6	

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	46	110	60	42	185	244	44	107	43	140	267
Average Queue (ft)	86	13	37	17	13	56	107	20	37	8	47	129
95th Queue (ft)	150	37	75	42	34	135	200	45	72	30	98	207
Link Distance (ft)		234	234		1436	1436		612	612		669	669
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	180			70			220			150		
Storage Blk Time (%)	0			0			1				0	
Queuing Penalty (veh)	0			0			0				0	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	96	55
Average Queue (ft)	9	30
95th Queue (ft)	48	49
Link Distance (ft)	899	565
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 7

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	258	129	199	91	96	183	220	134
Average Queue (ft)	109	71	102	31	35	100	111	61
95th Queue (ft)	202	114	177	64	77	157	178	107
Link Distance (ft)	899	899		230	230		1209	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300			500		500
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	195	135	134	173	130	108	271	174
Average Queue (ft)	100	57	71	85	33	27	166	61
95th Queue (ft)	178	115	124	150	83	92	256	120
Link Distance (ft)		230	230	234	234	234	884	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	300							285
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	204	234	94	94	207	142	244	305	124	72	216	384
Average Queue (ft)	92	31	47	70	42	68	157	58	84	18	124	171
95th Queue (ft)	176	99	83	111	134	136	238	144	127	53	214	295
Link Distance (ft)		234	234		1436	1436		612	612		669	669
Upstream Blk Time (%)		0										
Queuing Penalty (veh)		1										
Storage Bay Dist (ft)	180			70			220			150		
Storage Blk Time (%)	1			10	1		2				5	
Queuing Penalty (veh)	1			7	2		3				1	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	55	41	140
Average Queue (ft)	9	2	50
95th Queue (ft)	41	16	96
Link Distance (ft)	899	899	565
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 15

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	R	L	T	T	L	LT	R
Maximum Queue (ft)	258	130	168	173	91	73	159	179	239
Average Queue (ft)	110	61	6	86	40	34	86	96	74
95th Queue (ft)	187	116	55	154	84	68	138	158	158
Link Distance (ft)	899	899			230	230		1209	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			245	300			500		500
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	LT	R
Maximum Queue (ft)	142	96	141	143	167	233	110
Average Queue (ft)	64	45	65	85	49	125	46
95th Queue (ft)	137	86	128	134	116	204	81
Link Distance (ft)		230	230	235	235	873	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)	300						285
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	T	L	T	TR	L	T	TR	L	T
Maximum Queue (ft)	57	101	65	99	95	312	139	261	128	165	92	132
Average Queue (ft)	21	41	21	51	64	42	63	144	50	68	13	85
95th Queue (ft)	50	84	54	89	109	171	122	225	100	120	48	123
Link Distance (ft)			235	235		1436	1436		612	612		669
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	180	180			70			400			150	
Storage Blk Time (%)					12	0						0
Queuing Penalty (veh)					8	0						0

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	186	88
Average Queue (ft)	91	22
95th Queue (ft)	151	55
Link Distance (ft)	669	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		200
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	54	183
Average Queue (ft)	6	57
95th Queue (ft)	34	136
Link Distance (ft)	899	565
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 9

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	146	135	28	133	130	133	383	282
Average Queue (ft)	80	80	2	72	81	76	202	95
95th Queue (ft)	140	134	29	123	128	124	335	222
Link Distance (ft)	906	906		239	239	239	1214	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			245					260
Storage Blk Time (%)							3	0
Queuing Penalty (veh)							13	0

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	144	145	156	161	84	100	312	189
Average Queue (ft)	73	72	77	97	42	17	159	36
95th Queue (ft)	130	138	147	166	83	73	283	142
Link Distance (ft)	239	239	239	245	245		886	
Upstream Blk Time (%)			0					
Queuing Penalty (veh)			0					
Storage Bay Dist (ft)						225		285
Storage Blk Time (%)							1	0
Queuing Penalty (veh)							2	0

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	189	134	100	83	85	109	206	118	97	27	160	224
Average Queue (ft)	98	29	47	39	24	55	122	37	50	8	58	119
95th Queue (ft)	176	95	91	82	81	109	206	112	87	24	126	205
Link Distance (ft)		245	245		1436	1436		612	612		668	668
Upstream Blk Time (%)		0										
Queuing Penalty (veh)		1										
Storage Bay Dist (ft)	180			70			220			150		
Storage Blk Time (%)	1	0	0	3	0		1				0	
Queuing Penalty (veh)	1	1	0	2	0		1				0	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	EB	WB	WB	SB
Directions Served	LT	T	T	TR	LR
Maximum Queue (ft)	134	149	99	122	48
Average Queue (ft)	68	86	54	80	23
95th Queue (ft)	116	140	96	117	50
Link Distance (ft)	899	899	906	906	565
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 20

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	L	T	T	LT	R
Maximum Queue (ft)	246	177	126	64	72	219	104
Average Queue (ft)	138	96	57	20	24	112	24
95th Queue (ft)	229	155	109	54	58	202	85
Link Distance (ft)	906	906	239	239	239	1214	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							260
Storage Blk Time (%)						1	0
Queuing Penalty (veh)						1	0

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	188	144	107	118	228	244	544	259
Average Queue (ft)	104	55	51	55	71	155	270	86
95th Queue (ft)	180	114	95	100	181	278	528	301
Link Distance (ft)	239	239	239	245	245		886	
Upstream Blk Time (%)	0	0			0	1		
Queuing Penalty (veh)	0	0			1	0		
Storage Bay Dist (ft)						225		285
Storage Blk Time (%)					0	2	15	0
Queuing Penalty (veh)					0	2	34	0

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	TR	L	T
Maximum Queue (ft)	194	216	154	28	50	83	285	245	597	353	71	231
Average Queue (ft)	135	58	57	2	13	24	160	236	363	82	13	106
95th Queue (ft)	203	165	124	28	39	64	316	276	714	247	50	203
Link Distance (ft)		245	245			1436	1436		612	612		668
Upstream Blk Time (%)		0	0						3			
Queuing Penalty (veh)		1	0						0			
Storage Bay Dist (ft)	180			130	70			220			150	
Storage Blk Time (%)	3	0	0	0	0	1		44	1			2
Queuing Penalty (veh)	3	1	0	0	0	0		37	4			1

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	361
Average Queue (ft)	199
95th Queue (ft)	334
Link Distance (ft)	668
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	72	8	57
Average Queue (ft)	20	1	30
95th Queue (ft)	61	6	51
Link Distance (ft)	899	906	565
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 88

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	160	175	27	177	147	144	637	285
Average Queue (ft)	97	90	2	92	87	84	265	115
95th Queue (ft)	172	161	28	163	142	134	553	266
Link Distance (ft)	906	906		239	239	239	1214	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			245					260
Storage Blk Time (%)							6	0
Queuing Penalty (veh)							27	1

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	149	148	144	198	92	94	326	182
Average Queue (ft)	74	88	87	107	34	18	159	31
95th Queue (ft)	143	159	149	194	83	74	302	126
Link Distance (ft)	239	239	239	245	245		886	
Upstream Blk Time (%)				0				
Queuing Penalty (veh)				0				
Storage Bay Dist (ft)						225		285
Storage Blk Time (%)							1	0
Queuing Penalty (veh)							2	0

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	187	71	87	61	78	150	214	51	80	33	97	184
Average Queue (ft)	91	16	36	18	23	70	125	21	40	9	42	98
95th Queue (ft)	169	55	76	54	65	140	212	48	77	27	91	170
Link Distance (ft)		245	245		1436	1436		612	612		668	668
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	180			70			220			150		
Storage Blk Time (%)	1	0	0	1	1		0					
Queuing Penalty (veh)	1	0	0	0	1		0					

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	38	78
Average Queue (ft)	4	36
95th Queue (ft)	25	68
Link Distance (ft)	899	565
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 33

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	L	T	T	LT	R
Maximum Queue (ft)	228	182	122	63	93	218	53
Average Queue (ft)	131	78	56	29	38	111	20
95th Queue (ft)	224	159	119	74	92	201	56
Link Distance (ft)	906	906	239	239	239	1214	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)							260
Storage Blk Time (%)		0				0	
Queuing Penalty (veh)		0				0	

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	224	129	107	117	301	250	696	309
Average Queue (ft)	109	66	48	60	106	189	439	159
95th Queue (ft)	203	118	98	107	261	278	935	386
Link Distance (ft)	239	239	239	245	245		886	
Upstream Blk Time (%)	0				1	3	20	
Queuing Penalty (veh)	1				5	0	0	
Storage Bay Dist (ft)						225		285
Storage Blk Time (%)					0	4	14	22
Queuing Penalty (veh)					0	6	38	51

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	TR	L	T
Maximum Queue (ft)	187	220	210	31	33	71	396	245	502	164	125	297
Average Queue (ft)	144	85	76	2	10	29	222	234	355	43	20	135
95th Queue (ft)	217	214	184	31	29	66	489	281	707	142	78	297
Link Distance (ft)		245	245			1436	1436		612	612		668
Upstream Blk Time (%)		1	1						4			
Queuing Penalty (veh)		3	4						0			
Storage Bay Dist (ft)	180			130	70			220			150	
Storage Blk Time (%)	7	2	0			2		41				4
Queuing Penalty (veh)	7	5	0			1		30				1

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	446
Average Queue (ft)	252
95th Queue (ft)	433
Link Distance (ft)	668
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	95	56
Average Queue (ft)	24	29
95th Queue (ft)	74	54
Link Distance (ft)	899	565
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 152

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	197	211	133	206	145	125	1248	285
Average Queue (ft)	110	108	9	129	83	82	1111	270
95th Queue (ft)	177	187	82	202	130	121	1445	339
Link Distance (ft)	906	906		239	239	239	1214	
Upstream Blk Time (%)							12	
Queuing Penalty (veh)							0	
Storage Bay Dist (ft)			245					260
Storage Blk Time (%)		0	0				33	8
Queuing Penalty (veh)		0	0				208	38

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	64	196	195	219	108	124	321	180
Average Queue (ft)	16	120	121	121	56	40	180	43
95th Queue (ft)	51	177	183	200	102	119	295	153
Link Distance (ft)	239	239	239	245	245		886	
Upstream Blk Time (%)		0		0				
Queuing Penalty (veh)		0		2				
Storage Bay Dist (ft)						225		285
Storage Blk Time (%)							1	0
Queuing Penalty (veh)							3	0

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	TR	L	T
Maximum Queue (ft)	195	200	216	57	94	253	156	242	242	237	120	464
Average Queue (ft)	114	80	75	4	76	86	94	153	78	90	15	248
95th Queue (ft)	205	219	172	42	115	225	158	244	281	265	72	484
Link Distance (ft)		245	245			1436	1436		612	612		668
Upstream Blk Time (%)		1	0						0	0		
Queuing Penalty (veh)		5	1						0	0		
Storage Bay Dist (ft)	180			130	70			220			150	
Storage Blk Time (%)	3	1	0	0	26	3		6	0		0	36
Queuing Penalty (veh)	4	2	0	0	20	5		10	0		0	7

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	505
Average Queue (ft)	297
95th Queue (ft)	524
Link Distance (ft)	668
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	66	10	111
Average Queue (ft)	8	1	49
95th Queue (ft)	43	11	95
Link Distance (ft)	899	906	565
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 307

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	309	291	106	138	56	75	279	107
Average Queue (ft)	179	156	7	78	19	25	149	22
95th Queue (ft)	304	275	77	137	54	73	275	85
Link Distance (ft)	906	906		239	239	239	1214	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			245					260
Storage Blk Time (%)		1	0				2	
Queuing Penalty (veh)		4	0				3	

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	231	179	151	138	340	250	882	310
Average Queue (ft)	149	77	72	70	187	216	612	231
95th Queue (ft)	246	149	133	131	384	305	1081	425
Link Distance (ft)	239	239	239	245	245		886	
Upstream Blk Time (%)	1	0			4	7	31	
Queuing Penalty (veh)	3	0			24	0	0	
Storage Bay Dist (ft)						225		285
Storage Blk Time (%)						9	26	31
Queuing Penalty (veh)						15	77	81

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	TR	L	T
Maximum Queue (ft)	194	232	258	87	71	860	988	245	632	500	154	710
Average Queue (ft)	161	130	115	6	23	304	740	244	588	186	66	645
95th Queue (ft)	224	273	253	53	60	964	1208	246	745	492	189	797
Link Distance (ft)		245	245			1436	1436		612	612		668
Upstream Blk Time (%)		3	2			0	3		27	0		24
Queuing Penalty (veh)		13	10			0	0		0	0		0
Storage Bay Dist (ft)	180			130	70			220			150	
Storage Blk Time (%)	16	2	2	0	0	5		64	0		0	75
Queuing Penalty (veh)	21	8	5	0	0	2		76	0		0	28

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	712
Average Queue (ft)	663
95th Queue (ft)	761
Link Distance (ft)	668
Upstream Blk Time (%)	51
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	98	13	74
Average Queue (ft)	32	1	39
95th Queue (ft)	83	9	68
Link Distance (ft)	899	906	565
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 367

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	457	345	167	118	115	105	110	54
Average Queue (ft)	232	49	58	43	63	50	47	14
95th Queue (ft)	405	149	113	87	100	96	90	44
Link Distance (ft)	899	899		230	230		1209	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300			500		500
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	238	292	99	203	88	275	269	128
Average Queue (ft)	142	55	51	64	55	157	156	55
95th Queue (ft)	244	166	91	121	89	283	238	101
Link Distance (ft)		230	230	234	234	234	884	
Upstream Blk Time (%)	1	0				3		
Queuing Penalty (veh)	0	1				9		
Storage Bay Dist (ft)	300							285
Storage Blk Time (%)	1	0					0	
Queuing Penalty (veh)	1	1					0	

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	205	238	72	38	100	258	245	410	104	61	285	370
Average Queue (ft)	136	40	45	10	31	126	222	140	43	14	91	189
95th Queue (ft)	218	151	77	25	73	230	273	403	81	39	186	328
Link Distance (ft)		234	234		1436	1436		612	612		669	669
Upstream Blk Time (%)		1										
Queuing Penalty (veh)		2										
Storage Bay Dist (ft)	180			70			220			150		
Storage Blk Time (%)	10				4		16				1	
Queuing Penalty (veh)	9				1		11				0	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	117	57
Average Queue (ft)	29	26
95th Queue (ft)	78	48
Link Distance (ft)	899	565
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 35

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	685	514	170	86	95	150	134	51
Average Queue (ft)	389	150	46	29	51	65	67	13
95th Queue (ft)	679	373	101	66	85	118	117	40
Link Distance (ft)	899	899		230	230		1209	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300			500		500
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	239	314	228	132	107	278	855	310
Average Queue (ft)	154	132	100	70	58	175	295	194
95th Queue (ft)	279	302	176	118	90	309	635	370
Link Distance (ft)		230	230	234	234	234	884	
Upstream Blk Time (%)	4	2	0			3		
Queuing Penalty (veh)	0	7	2			13		
Storage Bay Dist (ft)	300							285
Storage Blk Time (%)	4	2					1	19
Queuing Penalty (veh)	10	6					3	49

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	TR	L	T	TR	L	T
Maximum Queue (ft)	205	312	234	154	76	44	265	245	628	478	175	708
Average Queue (ft)	183	177	81	5	18	19	176	244	490	84	49	631
95th Queue (ft)	256	349	180	51	50	46	257	246	786	212	155	841
Link Distance (ft)		234	234			1436	1436		612	612		669
Upstream Blk Time (%)		25	2						21			28
Queuing Penalty (veh)		106	10						0			0
Storage Bay Dist (ft)	180			130	70			220			150	
Storage Blk Time (%)	38	1	2	0	1			60				77
Queuing Penalty (veh)	48	5	4	0	1			66				27

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	703
Average Queue (ft)	639
95th Queue (ft)	836
Link Distance (ft)	669
Upstream Blk Time (%)	55
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	94	140
Average Queue (ft)	34	42
95th Queue (ft)	86	92
Link Distance (ft)	899	565
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 356

Intersection: 3: CTH II (Winchester Rd.) & 41 SB OFF

Movement	EB	EB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	L	T	T	L	LT	R
Maximum Queue (ft)	665	548	171	128	139	149	127	51
Average Queue (ft)	303	148	62	36	54	58	64	15
95th Queue (ft)	530	342	133	82	94	113	114	47
Link Distance (ft)	899	899		230	230		1209	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			300			500		500
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: CTH II (Winchester Rd.) & 41 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB
Directions Served	L	T	T	T	T	R	LT	R
Maximum Queue (ft)	238	315	180	148	125	268	317	310
Average Queue (ft)	164	140	90	77	66	15	122	76
95th Queue (ft)	272	314	163	122	120	108	225	170
Link Distance (ft)		230	230	234	234	234	876	
Upstream Blk Time (%)	3	1				0		
Queuing Penalty (veh)	0	7				1		
Storage Bay Dist (ft)	300							285
Storage Blk Time (%)	3	1					0	0
Queuing Penalty (veh)	10	6					1	0

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	EB	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	L	T	T	R	L	T	TR	L	T	TR	L
Maximum Queue (ft)	187	204	236	169	123	76	65	221	425	628	131	174
Average Queue (ft)	104	118	57	64	4	25	24	121	329	285	63	27
95th Queue (ft)	184	187	142	124	40	59	49	185	492	768	114	81
Link Distance (ft)			234	234	234		1438	1438		612	612	
Upstream Blk Time (%)			1							13		
Queuing Penalty (veh)			3							0		
Storage Bay Dist (ft)	180	180				70			400			150
Storage Blk Time (%)	0	2	0			1	0		27			
Queuing Penalty (veh)	0	2	0			2	0		30			

Intersection: 9: CTH II (Winchester Rd.) & Green Bay Rd.

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	219	209	159
Average Queue (ft)	116	133	63
95th Queue (ft)	193	189	126
Link Distance (ft)	673	673	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			200
Storage Blk Time (%)	4	0	
Queuing Penalty (veh)	1	1	

Intersection: 13: CTH II (Winchester Rd.) & Zeh Ave.

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	159	92
Average Queue (ft)	32	35
95th Queue (ft)	99	65
Link Distance (ft)	899	565
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 65

Intersection: 3: 41 SB ON & CTH N (Freedom Rd.)

Movement	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	L	T	T	T	T	R
Maximum Queue (ft)	91	74	131	74	107	117	95
Average Queue (ft)	57	41	23	25	72	54	0
95th Queue (ft)	95	78	58	64	117	77	0
Link Distance (ft)	824		544	544	790	790	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		550					75
Storage Blk Time (%)						8	0
Queuing Penalty (veh)						4	0

Intersection: 6: 41 NB OFF & CTH N (Freedom Rd.)

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	T	T	R	L	T	T
Maximum Queue (ft)	153	51	158	116	100	52	54	30
Average Queue (ft)	81	15	105	48	28	20	16	4
95th Queue (ft)	180	46	149	118	100	50	49	21
Link Distance (ft)	730		336	336			544	544
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		265			75	75		
Storage Blk Time (%)				5	0			
Queuing Penalty (veh)				13	0			

Intersection: 9: Evergreen Dr. & CTH N (Freedom Rd.)

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	28	30	30
Average Queue (ft)	17	24	13
95th Queue (ft)	34	40	37
Link Distance (ft)	999	894	790
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Moasis Dr. & CTH N (Freedom Rd.)

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	69	30	95	51	146
Average Queue (ft)	36	4	50	11	50
95th Queue (ft)	65	22	86	42	116
Link Distance (ft)	863	863	912		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				55	145
Storage Blk Time (%)				0	0
Queuing Penalty (veh)				0	1

Network Summary

Network wide Queuing Penalty: 19

Intersection: 3: 41 SB ON & CTH N (Freedom Rd.)

Movement	WB	NB	NB	NB	SB	SB
Directions Served	LT	L	T	T	T	T
Maximum Queue (ft)	70	113	129	124	116	91
Average Queue (ft)	44	64	75	48	51	58
95th Queue (ft)	68	112	132	112	109	89
Link Distance (ft)	824		544	544	790	790
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		550				
Storage Blk Time (%)						5
Queuing Penalty (veh)						4

Intersection: 6: 41 NB OFF & CTH N (Freedom Rd.)

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	T	T	R	L	T	T
Maximum Queue (ft)	224	136	96	32	80	31	49	78
Average Queue (ft)	123	45	66	13	11	9	7	15
95th Queue (ft)	237	118	105	35	58	31	35	61
Link Distance (ft)	730		336	336			544	544
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		265			75	75		
Storage Blk Time (%)					0			
Queuing Penalty (veh)					0			

Intersection: 9: Evergreen Dr. & CTH N (Freedom Rd.)

Movement	EB	WB	NB
Directions Served	LTR	LTR	LT
Maximum Queue (ft)	28	31	54
Average Queue (ft)	23	28	8
95th Queue (ft)	28	31	39
Link Distance (ft)	999	894	790
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: Moasis Dr. & CTH N (Freedom Rd.)

Movement	EB	EB	WB	SB
Directions Served	L	TR	LR	L
Maximum Queue (ft)	28	30	71	55
Average Queue (ft)	12	13	48	12
95th Queue (ft)	35	37	69	45
Link Distance (ft)	863	863	912	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				145
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 4

Intersection: 3: 41 SB ON & CTH N (Freedom Rd.)

Movement	WB	WB	NB	SB	SB
Directions Served	LT	R	L	T	T
Maximum Queue (ft)	141	33	92	133	71
Average Queue (ft)	105	9	39	61	54
95th Queue (ft)	144	34	92	117	69
Link Distance (ft)	817		542	790	790
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		120			
Storage Blk Time (%)	3				8
Queuing Penalty (veh)	6				6

Intersection: 6: 41 NB OFF & CTH N (Freedom Rd.)

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	T	T	R	L	T	T
Maximum Queue (ft)	113	56	247	116	100	51	29	87
Average Queue (ft)	64	23	148	63	57	38	24	45
95th Queue (ft)	122	57	245	105	122	56	40	77
Link Distance (ft)	730		339	339			542	542
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		265			75	75		
Storage Blk Time (%)				7	1			
Queuing Penalty (veh)				20	1			

Intersection: 9: Evergreen Dr. & CTH N (Freedom Rd.)

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	182	464	250	51	118	72
Average Queue (ft)	144	301	128	26	78	46
95th Queue (ft)	202	499	218	58	123	85
Link Distance (ft)	995	888	790	790	205	205
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Moasis Dr. & CTH N (Freedom Rd.)

Movement	EB	EB	WB	NB	NB	SB	SB
Directions Served	L	TR	LTR	L	TR	L	TR
Maximum Queue (ft)	92	30	542	52	20	170	19
Average Queue (ft)	45	13	350	22	6	68	3
95th Queue (ft)	88	37	552	49	20	138	14
Link Distance (ft)	844	844	894		1062		339
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)				55		145	
Storage Blk Time (%)				1		1	
Queuing Penalty (veh)				2		3	

Network Summary

Network wide Queuing Penalty: 39

Intersection: 3: 41 SB ON & CTH N (Freedom Rd.)

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	T	T	T	T	R
Maximum Queue (ft)	135	135	51	51	26	198	249	100
Average Queue (ft)	62	19	25	16	9	144	132	69
95th Queue (ft)	128	98	48	49	26	201	229	141
Link Distance (ft)	817		542	542	542	784	784	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120						75
Storage Blk Time (%)	1	0					25	0
Queuing Penalty (veh)	1	0					48	1

Intersection: 6: 41 NB OFF & CTH N (Freedom Rd.)

Movement	EB	EB	NB	NB	NB	SB
Directions Served	LT	R	T	T	R	T
Maximum Queue (ft)	240	136	221	135	100	66
Average Queue (ft)	136	70	101	68	34	17
95th Queue (ft)	219	127	141	137	104	61
Link Distance (ft)	734		338	338		542
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		265			75	
Storage Blk Time (%)				3	0	0
Queuing Penalty (veh)				11	0	0

Intersection: 9: Evergreen Dr. & CTH N (Freedom Rd.)

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	287	204	140	73	118	160
Average Queue (ft)	109	143	81	26	72	92
95th Queue (ft)	237	232	138	70	126	173
Link Distance (ft)	995	888	784	784	199	199
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Moasis Dr. & CTH N (Freedom Rd.)

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	TR	LTR	L	TR	L
Maximum Queue (ft)	52	55	168	26	20	68
Average Queue (ft)	36	29	73	4	3	26
95th Queue (ft)	53	63	158	19	14	61
Link Distance (ft)	844	844	894		1062	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				55		145
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 61

Intersection: 3: 41 SB ON & CTH N (Freedom Rd.)

Movement	WB	NB	NB	SB	SB
Directions Served	LT	L	T	T	T
Maximum Queue (ft)	141	70	21	133	111
Average Queue (ft)	107	32	3	64	54
95th Queue (ft)	136	72	15	119	79
Link Distance (ft)	817	542	542	790	790
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)					
Storage Blk Time (%)	3				9
Queuing Penalty (veh)	5				7

Intersection: 6: 41 NB OFF & CTH N (Freedom Rd.)

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	T	T	R	L	T	T
Maximum Queue (ft)	113	55	183	71	55	72	42	68
Average Queue (ft)	65	22	131	41	16	47	30	35
95th Queue (ft)	123	56	186	75	56	71	38	67
Link Distance (ft)	734		338	338			542	542
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		265			150	75		
Storage Blk Time (%)						0		
Queuing Penalty (veh)						1		

Intersection: 9: Evergreen Dr. & CTH N (Freedom Rd.)

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	182	464	250	70	118	72
Average Queue (ft)	140	300	125	26	72	46
95th Queue (ft)	200	499	217	68	126	85
Link Distance (ft)	995	888	790	790	205	205
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Moasis Dr. & CTH N (Freedom Rd.)

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	TR	LTR	L	TR	L
Maximum Queue (ft)	92	30	542	52	20	170
Average Queue (ft)	45	13	321	19	9	63
95th Queue (ft)	90	37	549	49	25	145
Link Distance (ft)	844	844	894		1062	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				55		145
Storage Blk Time (%)				1		1
Queuing Penalty (veh)				2		3

Network Summary

Network wide Queuing Penalty: 19

Intersection: 3: 41 SB ON & CTH N (Freedom Rd.)

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	T	T	T	T	R
Maximum Queue (ft)	91	33	51	22	26	278	280	100
Average Queue (ft)	57	5	28	8	4	147	153	48
95th Queue (ft)	87	24	55	25	19	241	262	122
Link Distance (ft)	817		542	542	542	784	784	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120						75
Storage Blk Time (%)							19	0
Queuing Penalty (veh)							35	0

Intersection: 6: 41 NB OFF & CTH N (Freedom Rd.)

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	T	T	R	L	T	T
Maximum Queue (ft)	243	77	156	72	54	29	66	20
Average Queue (ft)	161	49	102	31	23	6	9	5
95th Queue (ft)	233	93	166	70	66	24	47	18
Link Distance (ft)	734		338	338			542	542
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		265			150	75		
Storage Blk Time (%)							0	
Queuing Penalty (veh)							0	

Intersection: 9: Evergreen Dr. & CTH N (Freedom Rd.)

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	116	204	162	50	202	179
Average Queue (ft)	86	138	112	28	90	90
95th Queue (ft)	127	229	169	50	150	162
Link Distance (ft)	995	888	784	784	199	199
Upstream Blk Time (%)					1	
Queuing Penalty (veh)					0	
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Moasis Dr. & CTH N (Freedom Rd.)

Movement	EB	EB	WB	NB	SB
Directions Served	L	TR	LTR	L	L
Maximum Queue (ft)	80	55	168	26	55
Average Queue (ft)	43	29	63	4	18
95th Queue (ft)	74	63	137	19	43
Link Distance (ft)	844	844	894		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				55	145
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 36

Intersection: 3: 41 SB ON & CTH N (Freedom Rd.)

Movement	WB	WB	NB	NB	NB	SB	SB
Directions Served	LT	R	L	T	T	T	T
Maximum Queue (ft)	116	36	75	96	75	136	115
Average Queue (ft)	79	5	35	75	33	60	46
95th Queue (ft)	120	26	71	106	58	115	95
Link Distance (ft)	820		541	541	541	790	790
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)		120					
Storage Blk Time (%)	0						3
Queuing Penalty (veh)	0						3

Intersection: 6: 41 NB OFF & CTH N (Freedom Rd.)

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	T	T	R	L	T	T
Maximum Queue (ft)	138	54	221	120	100	70	50	52
Average Queue (ft)	99	0	156	84	53	35	10	19
95th Queue (ft)	154	0	228	124	129	68	40	50
Link Distance (ft)	729		336	336			541	541
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		265			75	75		
Storage Blk Time (%)				13	0	2		
Queuing Penalty (veh)				39	1	4		

Intersection: 9: Evergreen Dr. & CTH N (Freedom Rd.)

Movement	EB	WB	NB	NB	SB
Directions Served	LTR	LTR	LT	TR	LT
Maximum Queue (ft)	1010	903	96	22	52
Average Queue (ft)	909	751	48	3	20
95th Queue (ft)	1153	1095	97	16	51
Link Distance (ft)	995	888	790	790	202
Upstream Blk Time (%)	54	47			
Queuing Penalty (veh)	0	0			
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 12: Moasis Dr. & CTH N (Freedom Rd.)

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	TR	LTR	L	T	L
Maximum Queue (ft)	55	68	506	52	30	54
Average Queue (ft)	31	29	225	21	4	48
95th Queue (ft)	60	68	488	49	22	60
Link Distance (ft)	845	845	894		1062	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				55		145
Storage Blk Time (%)				2		
Queuing Penalty (veh)				3		

Network Summary

Network wide Queuing Penalty: 50

Intersection: 3: 41 SB ON & CTH N (Freedom Rd.)

Movement	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	L	T	T	T	T	R
Maximum Queue (ft)	140	138	74	131	139	182	206	100
Average Queue (ft)	86	20	53	96	82	114	151	56
95th Queue (ft)	129	100	79	135	128	182	215	135
Link Distance (ft)	817		541	541	541	784	784	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		120						75
Storage Blk Time (%)	2	0					20	0
Queuing Penalty (veh)	2	0					49	0

Intersection: 6: 41 NB OFF & CTH N (Freedom Rd.)

Movement	EB	EB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	T	T	R	L	T	T
Maximum Queue (ft)	206	120	139	93	92	52	88	30
Average Queue (ft)	140	62	96	48	26	28	13	8
95th Queue (ft)	217	120	140	87	94	60	63	30
Link Distance (ft)	729		336	336			541	541
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		265			75	75		
Storage Blk Time (%)				1	0		2	
Queuing Penalty (veh)				4	0		1	

Intersection: 9: Evergreen Dr. & CTH N (Freedom Rd.)

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	138	444	53	22	118	82
Average Queue (ft)	80	335	15	9	61	12
95th Queue (ft)	132	447	47	26	109	59
Link Distance (ft)	995	888	784	784	196	196
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 12: Moasis Dr. & CTH N (Freedom Rd.)

Movement	EB	EB	WB	NB	NB	SB
Directions Served	L	TR	LTR	L	TR	L
Maximum Queue (ft)	74	98	99	30	24	67
Average Queue (ft)	43	27	63	4	3	37
95th Queue (ft)	68	45	96	22	18	60
Link Distance (ft)	845	845	894		1062	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				55		145
Storage Blk Time (%)						
Queuing Penalty (veh)						

Network Summary

Network wide Queuing Penalty: 57

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	NB
Directions Served	L
Maximum Queue (ft)	54
Average Queue (ft)	27
95th Queue (ft)	52
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	300
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	EB	B10	NB	NB
Directions Served	T	T	T	L	R
Maximum Queue (ft)	177	249	11	56	150
Average Queue (ft)	40	76	1	24	20
95th Queue (ft)	134	206	11	56	98
Link Distance (ft)	244	244	653	1313	
Upstream Blk Time (%)	0	1			
Queuing Penalty (veh)	0	3			
Storage Bay Dist (ft)					240
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	TR	LT	TR
Maximum Queue (ft)	511	515	61	124	150	151	142	485	377
Average Queue (ft)	217	461	28	61	78	96	82	332	243
95th Queue (ft)	562	573	60	123	141	157	140	705	623
Link Distance (ft)	453	453		639	639	960	960	825	825
Upstream Blk Time (%)	5	19						8	4
Queuing Penalty (veh)	22	80						0	0
Storage Bay Dist (ft)			180						
Storage Blk Time (%)									
Queuing Penalty (veh)									

Network Summary

Network wide Queuing Penalty: 106

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	NB
Directions Served	L
Maximum Queue (ft)	58
Average Queue (ft)	28
95th Queue (ft)	53
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	300
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	NB	NB
Directions Served	T	L	R
Maximum Queue (ft)	12	45	26
Average Queue (ft)	1	18	2
95th Queue (ft)	9	45	26
Link Distance (ft)	244	1289	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			240
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	R	LT	TR	L	L	T
Maximum Queue (ft)	98	208	228	60	61	144	162	138	99	80	99	94
Average Queue (ft)	45	133	146	27	27	73	83	69	53	40	57	43
95th Queue (ft)	92	198	215	55	62	136	146	126	94	75	89	84
Link Distance (ft)	426	426	426	426		628	628	951	951			825
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					180					400	400	
Storage Blk Time (%)						0						
Queuing Penalty (veh)						0						

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	91	31
Average Queue (ft)	61	14
95th Queue (ft)	96	38
Link Distance (ft)	825	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	NB
Directions Served	L
Maximum Queue (ft)	63
Average Queue (ft)	33
95th Queue (ft)	55
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	300
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	EB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	39	54	48	23
Average Queue (ft)	5	8	19	2
95th Queue (ft)	32	37	48	23
Link Distance (ft)	244	244	1313	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				240
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	TR	LT	TR
Maximum Queue (ft)	390	517	72	154	98	100	110	220	165
Average Queue (ft)	112	341	36	82	52	46	62	132	96
95th Queue (ft)	334	503	66	147	97	86	104	207	158
Link Distance (ft)	453	453		639	639	960	960	825	825
Upstream Blk Time (%)	1	3							
Queuing Penalty (veh)	2	10							
Storage Bay Dist (ft)			180						
Storage Blk Time (%)				0					
Queuing Penalty (veh)				0					

Network Summary

Network wide Queuing Penalty: 12

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	NB
Directions Served	L
Maximum Queue (ft)	70
Average Queue (ft)	34
95th Queue (ft)	58
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	300
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	NB
Directions Served	T	L
Maximum Queue (ft)	6	49
Average Queue (ft)	0	19
95th Queue (ft)	7	48
Link Distance (ft)	244	1289
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	T	R	L	T	R	LT	TR	L	L	T
Maximum Queue (ft)	98	158	157	53	78	165	121	76	91	71	84	60
Average Queue (ft)	50	86	95	30	37	96	54	40	49	30	48	30
95th Queue (ft)	92	141	151	52	74	162	99	69	91	62	79	61
Link Distance (ft)	426	426	426	426		628	628	951	951			825
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)					180					400	400	
Storage Blk Time (%)						1						
Queuing Penalty (veh)						0						

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	92	31
Average Queue (ft)	49	13
95th Queue (ft)	81	37
Link Distance (ft)	825	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		400
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	NB
Directions Served	L
Maximum Queue (ft)	58
Average Queue (ft)	25
95th Queue (ft)	50
Link Distance (ft)	1047
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	EB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	45	82	31	23
Average Queue (ft)	4	12	13	3
95th Queue (ft)	34	60	38	30
Link Distance (ft)	244	244	1313	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				240
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	TR	LT	TR
Maximum Queue (ft)	396	479	70	171	74	116	111	130	126
Average Queue (ft)	98	336	28	68	42	53	59	78	64
95th Queue (ft)	325	505	61	135	68	100	105	135	118
Link Distance (ft)	453	453		639	639	960	960	825	825
Upstream Blk Time (%)	1	3							
Queuing Penalty (veh)	2	10							
Storage Bay Dist (ft)			180						
Storage Blk Time (%)				1					
Queuing Penalty (veh)				0					

Network Summary

Network wide Queuing Penalty: 13

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	NB
Directions Served	L
Maximum Queue (ft)	47
Average Queue (ft)	24
95th Queue (ft)	48
Link Distance (ft)	1047
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	EB	NB	NB
Directions Served	T	T	L	R
Maximum Queue (ft)	110	103	43	47
Average Queue (ft)	27	28	17	3
95th Queue (ft)	107	108	44	34
Link Distance (ft)	244	244	1313	
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				240
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	TR	LT	TR
Maximum Queue (ft)	504	515	69	117	71	68	85	94	95
Average Queue (ft)	255	432	34	67	42	31	45	44	44
95th Queue (ft)	601	555	68	110	66	65	77	84	82
Link Distance (ft)	453	453		639	639	960	960	825	825
Upstream Blk Time (%)	9	16							
Queuing Penalty (veh)	28	48							
Storage Bay Dist (ft)			180						
Storage Blk Time (%)									
Queuing Penalty (veh)									

Network Summary

Network wide Queuing Penalty: 76

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	NB
Directions Served	L
Maximum Queue (ft)	60
Average Queue (ft)	28
95th Queue (ft)	54
Link Distance (ft)	1047
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	EB	B10	B10	NB	NB
Directions Served	T	T	T	T	L	R
Maximum Queue (ft)	205	239	17	8	57	83
Average Queue (ft)	48	85	1	1	21	17
95th Queue (ft)	166	221	13	8	52	85
Link Distance (ft)	244	244	653	653	1313	
Upstream Blk Time (%)	0	1				
Queuing Penalty (veh)	1	5				
Storage Bay Dist (ft)						240
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	TR	LT	TR
Maximum Queue (ft)	487	526	70	123	144	181	140	445	378
Average Queue (ft)	195	458	29	64	74	104	84	291	193
95th Queue (ft)	517	579	66	126	135	176	137	543	442
Link Distance (ft)	453	453		639	639	960	960	825	825
Upstream Blk Time (%)	4	18							
Queuing Penalty (veh)	16	77							
Storage Bay Dist (ft)			180						
Storage Blk Time (%)									
Queuing Penalty (veh)									

Network Summary

Network wide Queuing Penalty: 99

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	NB
Directions Served	L
Maximum Queue (ft)	52
Average Queue (ft)	37
95th Queue (ft)	55
Link Distance (ft)	1047
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	NB	NB
Directions Served	T	L	R
Maximum Queue (ft)	41	31	105
Average Queue (ft)	5	4	7
95th Queue (ft)	24	21	50
Link Distance (ft)	244	1313	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			240
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	TR	LT	TR
Maximum Queue (ft)	74	385	70	141	90	121	135	200	223
Average Queue (ft)	51	259	34	75	49	52	69	119	109
95th Queue (ft)	81	371	64	123	80	100	118	186	185
Link Distance (ft)	453	453		639	639	960	960	825	825
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			180						
Storage Blk Time (%)									
Queuing Penalty (veh)									

Network Summary

Network wide Queuing Penalty: 0

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	EB	NB	NB
Directions Served	T	L	R
Maximum Queue (ft)	463	971	200
Average Queue (ft)	439	756	195
95th Queue (ft)	500	1262	232
Link Distance (ft)	427	1047	
Upstream Blk Time (%)	72	19	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			175
Storage Blk Time (%)		1	68
Queuing Penalty (veh)		4	87

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	EB	B10	B10	NB	NB
Directions Served	T	T	T	T	L	R
Maximum Queue (ft)	337	329	717	722	405	251
Average Queue (ft)	315	313	684	710	171	127
95th Queue (ft)	332	331	721	721	469	289
Link Distance (ft)	244	244	653	653	1313	
Upstream Blk Time (%)	23	64	58	69		
Queuing Penalty (veh)	147	416	380	451		
Storage Bay Dist (ft)						240
Storage Blk Time (%)					15	1
Queuing Penalty (veh)					30	0

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	TR	LT	TR
Maximum Queue (ft)	512	538	106	364	380	398	337	854	852
Average Queue (ft)	360	506	40	165	175	216	141	840	834
95th Queue (ft)	679	553	90	300	337	412	272	852	870
Link Distance (ft)	453	453		639	639	960	960	825	825
Upstream Blk Time (%)	19	46						78	47
Queuing Penalty (veh)	123	295						0	0
Storage Bay Dist (ft)			180						
Storage Blk Time (%)				6					
Queuing Penalty (veh)				2					

Network Summary

Network wide Queuing Penalty: 1936

Intersection: 1: Oakridge Rd. (Main St.) & SB OFF

Movement	EB	NB
Directions Served	T	L
Maximum Queue (ft)	4	87
Average Queue (ft)	0	40
95th Queue (ft)	4	75
Link Distance (ft)	427	1047
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Oakridge Rd. (Main St.) & 41 NB OFF

Movement	EB	EB	NB
Directions Served	T	T	L
Maximum Queue (ft)	41	55	43
Average Queue (ft)	5	8	20
95th Queue (ft)	31	40	46
Link Distance (ft)	244	244	1313
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: Oakridge Rd. (Main St.) & Green Bay Rd.

Movement	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	TR	L	T	R	LT	TR	LT	TR
Maximum Queue (ft)	448	512	84	189	218	117	136	273	271
Average Queue (ft)	185	367	34	111	100	66	78	174	166
95th Queue (ft)	428	531	73	187	191	110	130	254	250
Link Distance (ft)	453	453		639	639	960	960	825	825
Upstream Blk Time (%)	1	3							
Queuing Penalty (veh)	4	11							
Storage Bay Dist (ft)			180						
Storage Blk Time (%)				1					
Queuing Penalty (veh)				0					

Network Summary

Network wide Queuing Penalty: 15

Intersection: 3: CTH OO (Northland Ave.) & 441 SB OFF

Movement	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	L	T	T	LT	R
Maximum Queue (ft)	108	74	53	116	155	50	74
Average Queue (ft)	64	50	37	43	64	24	15
95th Queue (ft)	99	83	53	111	150	53	59
Link Distance (ft)	1500	1500		448	448	782	
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			450				120
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 6: CTH OO (Northland Ave.) & 441 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	52	52	31	176	152	66	140	158	95
Average Queue (ft)	17	14	9	112	115	38	83	104	21
95th Queue (ft)	53	45	31	172	156	85	126	149	79
Link Distance (ft)		448	448	402	402			915	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	450					50	315		315
Storage Blk Time (%)					23	0			
Queuing Penalty (veh)					13	1			

Intersection: 9: CTH OO (Northland Ave.) & French Rd.

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	31	25	52	99
Average Queue (ft)	21	4	35	56
95th Queue (ft)	44	18	48	101
Link Distance (ft)			929	739
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100	100		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 12: CTH OO (Northland Ave.) & Conkey St.

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LR
Maximum Queue (ft)	27	28	41	47
Average Queue (ft)	18	21	12	10
95th Queue (ft)	38	36	38	38
Link Distance (ft)			712	759
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	150	150		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 13

Intersection: 3: CTH OO (Northland Ave.) & 441 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB
Directions Served	T	T	R	L	T	T	LT
Maximum Queue (ft)	95	98	55	97	31	53	51
Average Queue (ft)	76	76	8	64	17	35	28
95th Queue (ft)	99	101	38	114	41	64	56
Link Distance (ft)	1500	1500			448	448	782
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			300	450			
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 6: CTH OO (Northland Ave.) & 441 NB ON

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	29	51	31	151	82	19	72	94	223
Average Queue (ft)	19	29	9	83	63	5	36	61	122
95th Queue (ft)	39	52	32	147	80	19	77	90	214
Link Distance (ft)		448	448	402	402			915	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)	450					50	315		315
Storage Blk Time (%)					15				
Queuing Penalty (veh)					3				

Intersection: 9: CTH OO (Northland Ave.) & French Rd.

Movement	EB	WB	NB	SB
Directions Served	L	L	LTR	LTR
Maximum Queue (ft)	31	26	51	58
Average Queue (ft)	30	14	32	40
95th Queue (ft)	32	34	47	60
Link Distance (ft)			929	739
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	100	100		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 12: CTH OO (Northland Ave.) & Conkey St.

Movement	WB	NB	SB
Directions Served	L	LTR	LR
Maximum Queue (ft)	26	66	68
Average Queue (ft)	4	32	56
95th Queue (ft)	18	58	71
Link Distance (ft)		712	759
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	150		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 3

Intersection: 3: CTH OO (Northland Ave.) & 441 SB OFF

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	T	T	R	L	T	T	LT	R
Maximum Queue (ft)	118	95	182	28	354	272	95	226
Average Queue (ft)	86	57	79	10	54	58	80	124
95th Queue (ft)	133	95	183	30	257	205	102	232
Link Distance (ft)	1501	1501		445	445	445	780	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			400					350
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 6: CTH OO (Northland Ave.) & 441 NB ON

Movement	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	T	T	T	T	R	L	LT	R	R
Maximum Queue (ft)	31	342	309	324	225	362	376	121	149
Average Queue (ft)	9	208	201	185	75	244	253	83	39
95th Queue (ft)	31	328	305	271	231	355	382	142	142
Link Distance (ft)	445	943	943	943			909		
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)					200	425		400	400
Storage Blk Time (%)				6	0				
Queuing Penalty (veh)				9	0				

Intersection: 9: CTH OO (Northland Ave.) & French Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	L	T	TR	L	T	TR	LTR	LT	R
Maximum Queue (ft)	126	126	66	63	124	350	367	72	196	246
Average Queue (ft)	75	89	36	31	67	219	253	49	128	109
95th Queue (ft)	126	120	77	64	116	385	414	80	206	210
Link Distance (ft)			943	943		1070	1070	910	708	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200	200			100					250
Storage Blk Time (%)					0	24				0
Queuing Penalty (veh)					1	12				1

Intersection: 12: CTH OO (Northland Ave.) & Conkey St.

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	R	LTR	LR
Maximum Queue (ft)	119	71	29	112	70
Average Queue (ft)	58	43	7	47	29
95th Queue (ft)	122	69	26	118	65
Link Distance (ft)				693	740
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	150	150	150		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 22

Intersection: 3: CTH OO (Northland Ave.) & 441 SB OFF

Movement	EB	EB	EB	WB	SB
Directions Served	T	T	R	L	LT
Maximum Queue (ft)	305	289	270	53	74
Average Queue (ft)	259	244	171	39	48
95th Queue (ft)	311	305	293	58	80
Link Distance (ft)	1501	1501		445	780
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			400		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 6: CTH OO (Northland Ave.) & 441 NB ON

Movement	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	T	T	T	R	L	LT	R	R
Maximum Queue (ft)	298	267	185	16	96	113	252	193
Average Queue (ft)	181	104	97	8	74	90	195	150
95th Queue (ft)	236	212	162	21	112	132	258	224
Link Distance (ft)	978	978	978			909		
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)				200	425		400	400
Storage Blk Time (%)			0					
Queuing Penalty (veh)			0					

Intersection: 9: CTH OO (Northland Ave.) & French Rd.

Movement	EB	EB	EB	EB	WB	WB	WB	NB	SB	SB
Directions Served	L	L	T	TR	L	T	TR	LTR	LT	R
Maximum Queue (ft)	211	224	326	149	124	223	220	156	49	73
Average Queue (ft)	172	195	142	86	45	126	125	87	29	50
95th Queue (ft)	231	237	316	138	111	205	229	138	54	81
Link Distance (ft)			978	978		1070	1070	923	720	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	200	200			100					250
Storage Blk Time (%)	3	12				13				
Queuing Penalty (veh)	16	59				4				

Intersection: 12: CTH OO (Northland Ave.) & Conkey St.

Movement	EB	WB	WB	NB	SB
Directions Served	L	L	R	LTR	LR
Maximum Queue (ft)	30	30	20	255	410
Average Queue (ft)	19	6	3	161	299
95th Queue (ft)	39	25	14	274	464
Link Distance (ft)				712	759
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	150	150	150		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 79

Intersection: 3: 41 SB ON & CTH U (County Line Rd.)

Movement	WB	NB
Directions Served	LR	L
Maximum Queue (ft)	110	31
Average Queue (ft)	48	16
95th Queue (ft)	106	39
Link Distance (ft)	1011	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: 41 NB OFF & CTH U (County Line Rd.)

Movement	EB
Directions Served	LR
Maximum Queue (ft)	25
Average Queue (ft)	23
95th Queue (ft)	26
Link Distance (ft)	951
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: W. Frontage Rd. & CTH U (County Line Rd.)

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	30	26
Average Queue (ft)	19	17
95th Queue (ft)	39	36
Link Distance (ft)	623	797
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: E. Frontage Rd. & CTH U (County Line Rd.)

Movement	EB	WB	SB
Directions Served	LR	LR	LT
Maximum Queue (ft)	68	24	50
Average Queue (ft)	30	10	21
95th Queue (ft)	45	29	55
Link Distance (ft)	789	671	312
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Intersection: 3: 41 SB ON & CTH U (County Line Rd.)

Movement	WB	NB
Directions Served	LR	L
Maximum Queue (ft)	63	26
Average Queue (ft)	37	4
95th Queue (ft)	61	19
Link Distance (ft)	1011	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		100
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 6: 41 NB OFF & CTH U (County Line Rd.)

Movement	EB
Directions Served	LTR
Maximum Queue (ft)	25
Average Queue (ft)	20
95th Queue (ft)	34
Link Distance (ft)	951
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 9: W. Frontage Rd. & CTH U (County Line Rd.)

Movement	EB	WB
Directions Served	LTR	LTR
Maximum Queue (ft)	31	27
Average Queue (ft)	12	7
95th Queue (ft)	35	25
Link Distance (ft)	623	797
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 12: CTH U (County Line Rd.) &

Movement	EB	WB	SB
Directions Served	LR	LR	LT
Maximum Queue (ft)	24	24	29
Average Queue (ft)	16	6	4
95th Queue (ft)	33	23	21
Link Distance (ft)	789	671	312
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 0

Appendix M

Rodel Report

8:4:09 YEAR 2020 BALLARD/NB 41 RAMP-3 LANE* 135

E	(m)	12.00	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	10.97	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	280 965 000 5	1.00	50	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 1.170 0.75	15 45 75
SB-BALLARD	1.01	000 1286 437 5	1.00	50	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.02	434 000 461 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	1250	0	1728	900	
CAPACITY	veh	2380	1415	2400	2042	
AVE DELAY	secs	3.3	0.0	5.7	3.3	
MAX DELAY	secs	4.9	0.0	9.1	5.1	
AVE QUEUE	veh	1	0	3	1	
MAX QUEUE	veh	2	0	4	1	

AVEDEL	s 4.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.7
COST	$ 71

8:4:09 YEAR 2020 BALLARD/NB 41 RAMP-3 LANE* 136

E	(m)	12.00	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	10.97	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-BALLARD	1.01	311	1254	000	5	1.00	50	0.75	0.924	0.75	15	45	75
WB-NB41ON	1.01	000	000	000	0	1.00	50	0.75	0.924	0.75	15	45	75
SB-BALLARD	1.01	000	993	579	5	1.00	50	0.75	0.924	0.75	15	45	75
EB-NB41OFF	1.01	224	000	804	5	1.00	50	0.75	0.924	0.75	15	45	75

FLOW	veh	1570	0	1577	1033	
CAPACITY	veh	1990	985	2400	2198	
AVE DELAY	secs	9.1	0.0	4.3	3.1	
MAX DELAY	secs	13.6	0.0	5.3	3.8	
AVE QUEUE	veh	4	0	2	1	
MAX QUEUE	veh	6	0	2	1	

AVEDEL	s 5.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.7
COST	$ 101

8:4:09 YEAR 2020 BALLARD/NB 41 RAMP-3 LANE* 137

E	(m)	12.00	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	10.97	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	280 965 000 5	1.00	85	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 1.170 0.75	15 45 75
SB-BALLARD	1.01	000 1286 437 5	1.00	85	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.02	434 000 461 5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	1250	0	1728	900	
CAPACITY	veh	2175	1210	2195	1839	
AVE DELAY	secs	4.1	0.0	8.9	4.1	
MAX DELAY	secs	6.3	0.0	15.4	6.6	
AVE QUEUE	veh	1	0	4	1	
MAX QUEUE	veh	2	0	7	1	

AVEDEL s	6.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.7
COST $	101

8:4:09 YEAR 2020 BALLARD/NB 41 RAMP-3 LANE* 138

E	(m)	12.00	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	10.97	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-BALLARD	1.01	311	1254	000	5	1.00	85	0.75	0.924	0.75	15	45	75
WB-NB41ON	1.01	000	000	000	0	1.00	85	0.75	0.924	0.75	15	45	75
SB-BALLARD	1.01	000	993	579	5	1.00	85	0.75	0.924	0.75	15	45	75
EB-NB41OFF	1.01	224	000	804	5	1.00	85	0.75	0.924	0.75	15	45	75

FLOW	veh	1570	0	1577	1033	
CAPACITY	veh	1785	780	2195	1993	
AVE DELAY	secs	20.5	0.0	5.7	3.7	
MAX DELAY	secs	36.4	0.0	7.3	4.8	
AVE QUEUE	veh	9	0	3	1	
MAX QUEUE	veh	16	0	3	1	

AVEDEL	s 10.8
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	12.5
COST	$ 188

8:4:09 COLLEGE AVE / EISENHOWER - 2020 WB SEMI* 87

E (m)	8.00	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	3.65	3.65
RAD (m)	30.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 280 000 0	1.00	50	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	113 0000 000 0	1.00	50	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	000 000 000 5	1.00	50	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	000 000 335 0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	280	113	5	335
CAPACITY	veh	2187	983	1287	1285
AVE DELAY	secs	1.8	4.0	2.8	3.7
MAX DELAY	secs	2.1	4.7	3.1	4.3
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.6
COST	$ 9

8:4:09 COLLEGE AVE / EISENHOWER - 2020 WB SEMI* 88

E	(m)	8.00	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	3.65	
RAD	(m)	30.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 322 000 0	1.00	50	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	141 000 000 0	1.00	50	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	000 000 000 5	1.00	50	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	000 0000 323 0	1.00	50	0.75 0.859 0.75	15 45 75

FLOW	veh	322	141	5	323
CAPACITY	veh	2196	969	1287	1285
AVE DELAY	secs	1.9	4.2	2.8	3.7
MAX DELAY	secs	2.1	4.7	3.0	4.0
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.7
COST	$ 10

8:4:09 COLLEGE AVE / EISENHOWER - 2020 WB SEMI* 89

E	(m)	8.00	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	3.65	
RAD	(m)	30.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 280 000 0	1.00	85	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	113 0000 000 0	1.00	85	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	000 000 000 5	1.00	85	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	000 000 335 0	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	280	113	5	335
CAPACITY	veh	1982	779	1083	1080
AVE DELAY	secs	2.1	5.3	3.3	4.8
MAX DELAY	secs	2.4	6.2	3.7	5.5
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 3.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST	$ 12

8:4:09 COLLEGE AVE / EISENHOWER - 2020 WB SEMI* 90

E	(m)	8.00	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	3.65	
RAD	(m)	30.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 322 000 0	1.00	85	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	141 000 000 0	1.00	85	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	000 000 000 5	1.00	85	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	000 0000 323 0	1.00	85	0.75 0.859 0.75	15 45 75

FLOW	veh	322	141	5	323
CAPACITY	veh	1991	764	1083	1080
AVE DELAY	secs	2.1	5.7	3.3	4.7
MAX DELAY	secs	2.3	6.3	3.6	5.1
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 3.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST	$ 13

8:4:09 YEAR 2020 NORTHLAND/NB 41 RAMP-NB BYP* 132

E	(m)	8.00	12.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	7.31	10.97	3.65	7.31		
RAD	(m)	25.00	30.00	25.00	25.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	60.00	60.00	60.00	60.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	000	000	173	5	1.00	50	0.75 2.119 0.75	15 45 75
WB-NRTHLND	1.02	085	1378	000	5	1.00	50	0.75 2.119 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	50	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.01	000	1100	540	5	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	178	1468	0	1645
CAPACITY	veh	1192	2931	507	2399
AVE DELAY	secs	4.1	3.0	0.0	7.3
MAX DELAY	secs	8.5	6.5	0.0	17.1
AVE QUEUE	veh	0	1	0	3
MAX QUEUE	veh	0	2	0	6

AVEDEL s	5.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.8
COST $	72

8:4:09 YEAR 2020 NORTHLAND/NB 41 RAMP-NB BYP* 133

E	(m)	8.00	12.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	7.31	10.97	3.65	7.31		
RAD	(m)	25.00	30.00	25.00	25.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	60.00	60.00	60.00	60.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.03	000	000	361	5	1.00	50	0.75	0.996	0.75	15	45	75
WB-NRTHLND	1.01	210	1535	000	5	1.00	50	0.75	0.996	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	5	1.00	50	0.75	0.996	0.75	15	45	75
EB-NRTHLND	1.01	000	1252	517	5	1.00	50	0.75	0.996	0.75	15	45	75

FLOW	veh	366	1750	5	1774
CAPACITY	veh	1160	2812	347	2396
AVE DELAY	secs	4.5	3.4	5.0	5.8
MAX DELAY	secs	6.0	4.7	5.0	8.2
AVE QUEUE	veh	0	2	0	3
MAX QUEUE	veh	1	2	0	4

AVEDEL s	4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.0
COST $	75

8:4:09 YEAR 2020 NORTHLAND/NB 41 RAMP-NB BYP* 134

E	(m)	8.00	12.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	10.97	3.65	7.31	
RAD	(m)	25.00	30.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	000	000	173	5	1.00	85	0.75 2.119 0.75	15 45 75
WB-NRTHLND	1.02	085	1378	000	5	1.00	85	0.75 2.119 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	85	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.01	000	1100	540	5	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	178	1468	0	1645
CAPACITY	veh	1000	2728	302	2194
AVE DELAY	secs	5.3	3.7	0.0	14.6
MAX DELAY	secs	11.6	8.2	0.0	36.9
AVE QUEUE	veh	0	2	0	7
MAX QUEUE	veh	0	3	0	13

AVEDEL	s 9.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	8.5
COST	$ 127

8:4:09 YEAR 2020 NORTHLAND/NB 41 RAMP-NB BYP* 135

E	(m)	8.00	12.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	7.31	10.97	3.65	7.31		
RAD	(m)	25.00	30.00	25.00	25.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	60.00	60.00	60.00	60.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.03	000	000	361	5	1.00	85	0.75	0.996	0.75	15	45	75
WB-NRTHLND	1.01	210	1535	000	5	1.00	85	0.75	0.996	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	5	1.00	85	0.75	0.996	0.75	15	45	75
EB-NRTHLND	1.01	000	1252	517	5	1.00	85	0.75	0.996	0.75	15	45	75

FLOW	veh	366	1750	5	1774		
CAPACITY	veh	959	2607	142	2191		
AVE DELAY	secs	6.1	4.3	5.0	9.0		
MAX DELAY	secs	8.5	6.1	5.0	13.5		
AVE QUEUE	veh	1	2	0	5		
MAX QUEUE	veh	1	3	0	6		

AVEDEL	s 6.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.2
COST	$ 108

8:4:09 YEAR 2035 NORTHLAND/NB 41 RAMP-NB BYP* 124

E	(m)	12.00	12.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	10.97	3.65	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	70.00	70.00	70.00	70.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	000	000	292	0	1.00	50	0.75 2.119 0.75	15 45 75
WB-NRTHLND	1.02	098	1703	000	5	1.00	50	0.75 2.119 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	50	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.01	000	1929	609	5	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	292	1806	0	2543
CAPACITY	veh	1162	2837	381	3618
AVE DELAY	secs	7.0	6.3	0.0	5.7
MAX DELAY	secs	16.8	15.0	0.0	13.4
AVE QUEUE	veh	1	3	0	4
MAX QUEUE	veh	1	6	0	7

AVEDEL	s 6.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.7
COST	$ 116

8:4:09 YEAR 2035 NORTHLAND/NB 41 RAMP-NB BYP* 125

E	(m)	12.00	12.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	10.97	3.65	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	70.00	70.00	70.00	70.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.03	000	000	545	5	1.00	50	0.75	0.996	0.75	15	45	75
WB-NRTHLND	1.01	223	1614	000	5	1.00	50	0.75	0.996	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	5	1.00	50	0.75	0.996	0.75	15	45	75
EB-NRTHLND	1.01	000	1303	583	5	1.00	50	0.75	0.996	0.75	15	45	75

FLOW	veh	550	1842	5	1891	
CAPACITY	veh	1686	2679	317	3610	
AVE DELAY	secs	3.2	4.4	5.0	2.1	
MAX DELAY	secs	4.1	6.4	5.0	2.6	
AVE QUEUE	veh	0	2	0	1	
MAX QUEUE	veh	1	3	0	1	

AVEDEL	s 3.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.9
COST	$ 58

8:4:09 YEAR 2035 NORTHLAND/NB 41 RAMP-NB BYP* 126

E	(m)	12.00	12.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	10.97	3.65	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	70.00	70.00	70.00	70.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	000	000	292	0	1.00	85	0.75 2.119 0.75	15 45 75
WB-NRTHLND	1.02	098	1703	000	5	1.00	85	0.75 2.119 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	85	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.01	000	1929	609	5	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	292	1806	0	2543
CAPACITY	veh	970	2634	201	3413
AVE DELAY	secs	13.4	11.0	0.0	9.4
MAX DELAY	secs	34.5	28.3	0.0	23.6
AVE QUEUE	veh	1	6	0	7
MAX QUEUE	veh	2	11	0	13

AVEDEL	s 10.3
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	13.2
COST	$ 199

8:4:09 YEAR 2035 NORTHLAND/NB 41 RAMP-NB BYP* 127

E	(m)	12.00	12.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	10.97	3.65	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	70.00	70.00	70.00	70.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.03	000	000	545	5	1.00	85	0.75	0.996	0.75	15	45	75
WB-NRTHLND	1.01	223	1614	000	5	1.00	85	0.75	0.996	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	5	1.00	85	0.75	0.996	0.75	15	45	75
EB-NRTHLND	1.01	000	1303	583	5	1.00	85	0.75	0.996	0.75	15	45	75

FLOW	veh	550	1842	5	1891	
CAPACITY	veh	1485	2474	113	3405	
AVE DELAY	secs	3.9	6.1	5.0	2.3	
MAX DELAY	secs	5.2	9.3	5.0	3.0	
AVE QUEUE	veh	1	3	0	1	
MAX QUEUE	veh	1	4	0	1	

AVEDEL	s 4.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.0
COST	$ 75

8:4:09 YEAR 2020 OAKRIDGE/GREEN BAY-ALL 2 LANE* 44

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD min	90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE min	15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD min	15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST $/hr	15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD min	15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE pcu/veh	VEH
GRAD SEP		0	0	0	0	FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.03	014 149 071 5	1.00	50	0.75 1.892 0.75	15 45 75
WB-OAKRDGE	1.02	370 141 028 5	1.00	50	0.75 1.892 0.75	15 45 75
SB-GRN BAY	1.01	029 226 194 5	1.00	50	0.75 1.892 0.75	15 45 75
EB-OAKRDGE	1.02	104 558 090 5	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	239	544	454	757	AVEDEL s	2.5
CAPACITY	veh	1725	2138	2213	2039	LOS SIG	A
AVE DELAY	secs	2.4	2.3	2.0	2.9	LOS UNSIG	A
MAX DELAY	secs	4.4	4.0	3.5	5.5		
AVE QUEUE	veh	0	0	0	1	VEHIC HRS	1.4
MAX QUEUE	veh	0	0	0	1	COST $	21

8:4:09 YEAR 2020 OAKRIDGE/GREEN BAY-ALL 2 LANE* 45

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD min	90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE min	15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD min	15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST $/hr	15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD min	15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE pcu/veh	VEH
GRAD SEP		0	0	0	0	FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	044 146 033 5	1.00	50	0.75 1.335 0.75	15 45 75
WB-OAKRDGE	1.03	246 153 044 5	1.00	50	0.75 1.335 0.75	15 45 75
SB-GRN BAY	1.01	040 186 168 5	1.00	50	0.75 1.335 0.75	15 45 75
EB-OAKRDGE	1.01	154 384 112 5	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	228	448	399	655	AVEDEL s	2.2
CAPACITY	veh	1897	2135	2220	2096	LOS SIG	A
AVE DELAY	secs	2.1	2.1	1.9	2.5	LOS UNSIG	A
MAX DELAY	secs	3.1	3.0	2.8	3.7		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	1.1
MAX QUEUE	veh	0	0	0	1	COST $	16

8:4:09 YEAR 2020 OAKRIDGE/GREEN BAY-ALL 2 LANE* 46

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD min	90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE min	15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD min	15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST $/hr	15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD min	15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE pcu/veh	VEH
GRAD SEP		0	0	0	0	FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.03	014 149 071 5	1.00	85	0.75 1.892 0.75	15 45 75
WB-OAKRDGE	1.02	370 141 028 5	1.00	85	0.75 1.892 0.75	15 45 75
SB-GRN BAY	1.01	029 226 194 5	1.00	85	0.75 1.892 0.75	15 45 75
EB-OAKRDGE	1.02	104 558 090 5	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	239	544	454	757	AVEDEL s	2.9
CAPACITY	veh	1524	1935	2008	1836	LOS SIG	A
AVE DELAY	secs	2.8	2.6	2.3	3.6	LOS UNSIG	A
MAX DELAY	secs	5.2	4.7	4.0	6.8		
AVE QUEUE	veh	0	0	0	1	VEHIC HRS	1.6
MAX QUEUE	veh	0	1	0	1	COST $	24

8:4:09 YEAR 2020 OAKRIDGE/GREEN BAY-ALL 2 LANE* 47

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	044 146 033 5	1.00	85	0.75 1.335 0.75	15 45 75
WB-OAKRDGE	1.03	246 153 044 5	1.00	85	0.75 1.335 0.75	15 45 75
SB-GRN BAY	1.01	040 186 168 5	1.00	85	0.75 1.335 0.75	15 45 75
EB-OAKRDGE	1.01	154 384 112 5	1.00	85	0.75 1.335 0.75	15 45 75

FLOW	veh	228	448	399	655	AVEDEL	s 2.5
CAPACITY	veh	1692	1934	2015	1891	LOS SIG	A
AVE DELAY	secs	2.4	2.4	2.2	2.9	LOS UNSIG	A
MAX DELAY	secs	3.5	3.4	3.1	4.4		
AVE QUEUE	veh	0	0	0	1	VEHIC HRS	1.2
MAX QUEUE	veh	0	0	0	1	COST	$ 18

15:4:09 COLLEGE AVE / EISENHOWER - 2020 BYP* 117

E	(m)	12.00	12.00	12.00	12.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	10.97	10.97	10.97	10.97	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	30.00	30.00	30.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	070 280 746 0	1.00	50	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	000 1423 159 0	1.00	50	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	277 253 085 0	1.00	50	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	000 477 335 0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	1096	1582	615	812	AVEDEL s	3.2
CAPACITY	veh	2814	2396	1526	3175	LOS SIG	A
AVE DELAY	secs	2.1	4.4	4.0	1.5	LOS UNSIG	A
MAX DELAY	secs	2.5	5.9	5.2	1.7		
AVE QUEUE	veh	1	2	1	0	VEHIC HRS	3.6
MAX QUEUE	veh	1	2	1	0	COST $	54

15:4:09 COLLEGE AVE / EISENHOWER - 2020 BYP* 118

E	(m)	12.00	12.00	12.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	10.97	10.97	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	148	322	316	0	1.00	50	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	000	577	338	0	1.00	50	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	240	448	148	0	1.00	50	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	000	1788	323	0	1.00	50	0.75 0.859 0.75	15 45 75

FLOW	veh	786	915	836	2111
CAPACITY	veh	1588	2757	2514	2781
AVE DELAY	secs	4.4	1.9	2.1	5.3
MAX DELAY	secs	5.4	2.2	2.4	6.6
AVE QUEUE	veh	1	0	0	3
MAX QUEUE	veh	1	1	1	4

AVEDEL	s 3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.1
COST	$ 76

15:4:09 COLLEGE AVE / EISENHOWER - 2020 BYP* 119

E	(m)	12.00	12.00	12.00	12.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	10.97	10.97	10.97	10.97	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	30.00	30.00	30.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	070 280 746 0	1.00	85	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	000 1423 159 0	1.00	85	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	277 253 085 0	1.00	85	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	000 477 335 0	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	1096	1582	615	812	AVEDEL	s 4.1
CAPACITY	veh	2609	2191	1321	2970	LOS SIG	A
AVE DELAY	secs	2.3	6.0	5.2	1.6	LOS UNSIG	A
MAX DELAY	secs	2.8	8.4	7.0	1.9		
AVE QUEUE	veh	1	3	1	0	VEHIC HRS	4.6
MAX QUEUE	veh	1	4	1	0	COST	$ 69

15:4:09 COLLEGE AVE / EISENHOWER - 2020 BYP* 120

E	(m)	12.00	12.00	12.00	12.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	10.97	10.97	10.97	10.97	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	30.00	30.00	30.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	148 322 316 0	1.00	85	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	000 577 338 0	1.00	85	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	240 448 148 0	1.00	85	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	000 1788 323 0	1.00	85	0.75 0.859 0.75	15 45 75

FLOW	veh	786	915	836	2111	AVEDEL s	5.4
CAPACITY	veh	1383	2552	2309	2576	LOS SIG	A
AVE DELAY	secs	6.0	2.2	2.4	7.7	LOS UNSIG	A
MAX DELAY	secs	7.6	2.4	2.7	10.2		
AVE QUEUE	veh	1	1	1	5	VEHIC HRS	6.9
MAX QUEUE	veh	2	1	1	6	COST $	104

15:4:09 COLLEGE AVE / EISENHOWER -2020 DUALSEMI* 112

E	(m)	12.00	12.00	12.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 000 000 5	1.00	50	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	000 0000 159 0	1.00	50	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	000 253 000 0	1.00	50	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	206 000 000 0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	5	159	253	206	AVEDEL	s 1.5
CAPACITY	veh	3122	3098	2970	2120	LOS SIG	A
AVE DELAY	secs	1.1	1.2	1.3	1.9	LOS UNSIG	A
MAX DELAY	secs	1.3	1.4	1.5	2.1		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.3
MAX QUEUE	veh	0	0	0	0	COST	$ 4

15:4:09 COLLEGE AVE / EISENHOWER -2020 DUALSEMI* 113

E	(m)	12.00	12.00	12.00	8.00		TIME PERIOD	min	90		
L'	(m)	25.00	25.00	25.00	25.00		TIME SLICE	min	15		
V	(m)	7.31	7.31	7.31	7.31		RESULTS PERIOD	min	15	75	
RAD	(m)	30.00	25.00	25.00	25.00		TIME COST	$/hr	15.00		
PHI	(d)	30.00	30.00	30.00	30.00		FLOW PERIOD	min	15	75	
DIA	(m)	60.00	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH		
GRAD SEP		0	0	0	0		FLOW PEAK	am/op/pm	PM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 000 000 5	1.00	50	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	000 000 338 0	1.00	50	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	000 448 000 0	1.00	50	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	942 0000 000 0	1.00	50	0.75 0.859 0.75	15 45 75

FLOW	veh	5	338	448	942		AVEDEL	s	2.7
CAPACITY	veh	3122	3098	2825	1864		LOS SIG		A
AVE DELAY	secs	1.1	1.3	1.5	3.8		LOS UNSIG		A
MAX DELAY	secs	1.2	1.4	1.6	4.4				
AVE QUEUE	veh	0	0	0	1		VEHIC HRS		1.3
MAX QUEUE	veh	0	0	0	1		COST	$	20

15:4:09 COLLEGE AVE / EISENHOWER -2020 DUALSEMI* 114

E	(m)	12.00	12.00	12.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 000 000 5	1.00	85	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	000 0000 159 0	1.00	85	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	000 253 000 0	1.00	85	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	206 000 000 0	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	5	159	253	206	AVEDEL s	1.6
CAPACITY	veh	2917	2893	2765	1915	LOS SIG	A
AVE DELAY	secs	1.2	1.3	1.4	2.1	LOS UNSIG	A
MAX DELAY	secs	1.4	1.5	1.6	2.4		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.3
MAX QUEUE	veh	0	0	0	0	COST $	4

15:4:09 COLLEGE AVE / EISENHOWER -2020 DUALSEMI* 115

E	(m)	12.00	12.00	12.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 000 000 5	1.00	85	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	000 000 338 0	1.00	85	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	000 448 000 0	1.00	85	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	942 0000 000 0	1.00	85	0.75 0.859 0.75	15 45 75

FLOW	veh	5	338	448	942	AVEDEL s	3.4
CAPACITY	veh	2917	2893	2620	1659	LOS SIG	A
AVE DELAY	secs	1.2	1.4	1.6	4.9	LOS UNSIG	A
MAX DELAY	secs	1.3	1.5	1.8	5.7		
AVE QUEUE	veh	0	0	0	1	VEHIC HRS	1.6
MAX QUEUE	veh	0	0	0	1	COST $	24

13:1:09 YEAR 2020 BALLARD/EVERGREEN-NB BYPASS* 337

E	(m)	8.00	8.00	8.00	TIME PERIOD	min	90
L'	(m)	25.00	25.00	25.00	TIME SLICE	min	15
V	(m)	7.31	7.31	7.31	RESULTS PERIOD	min	15 75
RAD	(m)	25.00	25.00	25.00	TIME COST	$/hr	15.00
PHI	(d)	30.00	30.00	30.00	FLOW PERIOD	min	15 75
DIA	(m)	50.00	50.00	50.00	FLOW TYPE	pcu/veh	VEH
GRAD SEP		0	0	0	FLOW PEAK	am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1320 5	1.00	50	0.75 1.465 0.75	15 45 75
WB-EVRGRN	1.01	125 684 5	1.00	50	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.01	1234 086 5	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	1325	814	1325	AVEDEL	s	6.8
CAPACITY	veh	2335	1410	1887	LOS SIG		A
AVE DELAY	secs	3.8	8.3	9.1	LOS UNSIG		A
MAX DELAY	secs	6.4	16.3	18.3			
AVE QUEUE	veh	1	2	3	VEHIC HRS		6.6
MAX QUEUE	veh	2	3	6	COST	$	99

13:1:09 YEAR 2020 BALLARD/EVERGREEN-NB BYPASS* 338

E	(m)	8.00	8.00	8.00	TIME PERIOD	min	90
L'	(m)	25.00	25.00	25.00	TIME SLICE	min	15
V	(m)	7.31	7.31	7.31	RESULTS PERIOD	min	15 75
RAD	(m)	25.00	25.00	25.00	TIME COST	$/hr	15.00
PHI	(d)	30.00	30.00	30.00	FLOW PERIOD	min	15 75
DIA	(m)	50.00	50.00	50.00	FLOW TYPE	pcu/veh	VEH
GRAD SEP		0	0	0	FLOW PEAK	am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1118 5	1.00	50	0.75 0.830 0.75	15 45 75
WB-EVRGRN	1.01	078 909 5	1.00	50	0.75 0.830 0.75	15 45 75
SB-BALLARD	1.01	934 129 5	1.00	50	0.75 0.830 0.75	15 45 75

FLOW	veh	1123	992	1068	AVEDEL	s	4.8
CAPACITY	veh	2302	1561	1718	LOS SIG		A
AVE DELAY	secs	3.0	6.2	5.4	LOS UNSIG		A
MAX DELAY	secs	3.3	7.2	6.2			
AVE QUEUE	veh	1	2	2	VEHIC HRS		4.3
MAX QUEUE	veh	1	2	2	COST	$	64

13:1:09 YEAR 2020 BALLARD/EVERGREEN-NB BYPASS* 339

E (m)	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00
V (m)	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1320 5	1.00	85	0.75 1.465 0.75	15 45 75
WB-EVRGRN	1.01	125 684 5	1.00	85	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.01	1234 086 5	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	1325	814	1325
CAPACITY	veh	2130	1205	1682
AVE DELAY	secs	4.9	19.5	22.0
MAX DELAY	secs	8.6	43.5	51.7
AVE QUEUE	veh	2	4	8
MAX QUEUE	veh	3	9	17

AVEDEL s	14.9
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	14.3
COST $	215

13:1:09 YEAR 2020 BALLARD/EVERGREEN-NB BYPASS* 340

E	(m)	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	
GRAD SEP		0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1118 5	1.00	85	0.75 0.830 0.75	15 45 75
WB-EVRGRN	1.01	078 909 5	1.00	85	0.75 0.830 0.75	15 45 75
SB-BALLARD	1.01	934 129 5	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	1123	992	1068	
CAPACITY	veh	2097	1356	1513	
AVE DELAY	secs	3.6	9.6	7.9	
MAX DELAY	secs	4.0	11.6	9.3	
AVE QUEUE	veh	1	3	2	
MAX QUEUE	veh	1	3	3	

AVEDEL	s 6.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.1
COST	$ 92

13:1:09 YEAR 2020 BALLARD/EVERGREEN-NB SEMI* 166

E	(m)	4.30	8.00	8.00	TIME PERIOD	min	90
L'	(m)	25.00	25.00	25.00	TIME SLICE	min	15
V	(m)	3.65	7.31	7.31	RESULTS PERIOD	min	15 75
RAD	(m)	25.00	25.00	25.00	TIME COST	$/hr	15.00
PHI	(d)	30.00	30.00	30.00	FLOW PERIOD	min	15 75
DIA	(m)	55.00	55.00	55.00	FLOW TYPE	pcu/veh	VEH
GRAD SEP		0	0	0	FLOW PEAK	am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	573 0000 0	1.00	50	0.75 1.465 0.75	15 45 75
WB-EVRGRN	1.01	000 0000 5	1.00	50	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.01	0000 086 0	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	573	5	86	AVEDEL	s	4.9
CAPACITY	veh	1241	2407	2403	LOS	SIG	A
AVE DELAY	secs	5.4	1.5	1.5	LOS	UNSIG	A
MAX DELAY	secs	8.8	2.1	2.2			
AVE QUEUE	veh	1	0	0	VEHIC HRS		0.9
MAX QUEUE	veh	1	0	0	COST	$	14

13:1:09 YEAR 2020 BALLARD/EVERGREEN-NB SEMI* 167

E	(m)	4.30	8.00	8.00	TIME PERIOD	min	90
L'	(m)	25.00	25.00	25.00	TIME SLICE	min	15
V	(m)	3.65	7.31	7.31	RESULTS PERIOD	min	15 75
RAD	(m)	25.00	25.00	25.00	TIME COST	$/hr	15.00
PHI	(d)	30.00	30.00	30.00	FLOW PERIOD	min	15 75
DIA	(m)	55.00	55.00	55.00	FLOW TYPE	pcu/veh	VEH
GRAD SEP		0	0	0	FLOW PEAK	am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	980 0000 0	1.00	50	0.75 0.830 0.75	15 45 75
WB-EVRGRN	1.01	000 0000 5	1.00	50	0.75 0.830 0.75	15 45 75
SB-BALLARD	1.01	0000 129 0	1.00	50	0.75 0.830 0.75	15 45 75

FLOW	veh	980	5	129	AVEDEL	s	12.8
CAPACITY	veh	1219	2407	2403	LOS	SIG	B
AVE DELAY	secs	14.3	1.5	1.6	LOS	UNSIG	B
MAX DELAY	secs	17.0	1.6	1.7			
AVE QUEUE	veh	4	0	0	VEHIC HRS		4.0
MAX QUEUE	veh	5	0	0	COST	$	59

13:1:09 YEAR 2020 BALLARD/EVERGREEN-NB SEMI* 168

E	(m)	4.30	8.00	8.00	TIME PERIOD	min	90
L'	(m)	25.00	25.00	25.00	TIME SLICE	min	15
V	(m)	3.65	7.31	7.31	RESULTS PERIOD	min	15 75
RAD	(m)	25.00	25.00	25.00	TIME COST	$/hr	15.00
PHI	(d)	30.00	30.00	30.00	FLOW PERIOD	min	15 75
DIA	(m)	55.00	55.00	55.00	FLOW TYPE	pcu/veh	VEH
GRAD SEP		0	0	0	FLOW PEAK	am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	573 0000 0	1.00	85	0.75 1.465 0.75	15 45 75
WB-EVRGRN	1.01	000 0000 5	1.00	85	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.01	0000 086 0	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	573	5	86	AVEDEL	s	7.2
CAPACITY	veh	1036	2202	2198	LOS	SIG	A
AVE DELAY	secs	8.1	1.6	1.7	LOS	UNSIG	A
MAX DELAY	secs	13.7	2.3	2.4			
AVE QUEUE	veh	1	0	0	VEHIC	HRS	1.3
MAX QUEUE	veh	2	0	0	COST	$	20

13:1:09 YEAR 2020 BALLARD/EVERGREEN-NB SEMI* 169

E (m)	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00
V (m)	3.65	7.31	7.31
RAD (m)	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00
GRAD SEP	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	980 0000 0	1.00	85	0.75 0.830 0.75	15 45 75
WB-EVRGRN	1.01	000 0000 5	1.00	85	0.75 0.830 0.75	15 45 75
SB-BALLARD	1.01	0000 129 0	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	980	5	129
CAPACITY	veh	1014	2202	2198
AVE DELAY	secs	58.8	1.6	1.7
MAX DELAY	secs	84.1	1.7	1.8
AVE QUEUE	veh	18	0	0
MAX QUEUE	veh	22	0	0

AVEDEL s	52.0
LOS SIG	D
LOS UNSIG	F
VEHIC HRS	16.1
COST $	241

13:1:09 YEAR 2020 BALLARD/SB 41 RAMP-BYPASS* 103

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1248 165 5	1.00	50	0.75 1.465 0.75	15 45 75
WB-SB41OFF	1.02	000 000 346 5	1.00	50	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.02	000 1320 000 5	1.00	50	0.75 1.465 0.75	15 45 75
EB-SB41ON	1.02	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	1418	351	1325	0	AVEDEL	s 5.1
CAPACITY	veh	2399	1327	1994	1123	LOS SIG	A
AVE DELAY	secs	3.9	3.9	6.6	0.0	LOS UNSIG	A
MAX DELAY	secs	6.7	6.7	12.6	0.0		
AVE QUEUE	veh	2	0	3	0	VEHIC HRS	4.4
MAX QUEUE	veh	2	1	4	0	COST	$ 65

13:1:09 YEAR 2020 BALLARD/SB 41 RAMP-BYPASS* 104

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1571 362 5	1.00	50	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	000 000 240 0	1.00	50	0.75 1.123 0.75	15 45 75
SB-BALLARD	1.02	000 1371 000 5	1.00	50	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	1938	240	1376	0	AVEDEL s	8.0
CAPACITY	veh	2403	951	1933	1182	LOS SIG	A
AVE DELAY	secs	8.9	5.3	7.1	0.0	LOS UNSIG	A
MAX DELAY	secs	15.2	8.0	11.4	0.0		
AVE QUEUE	veh	5	0	3	0	VEHIC HRS	7.9
MAX QUEUE	veh	7	0	4	0	COST $	118

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E (m)	8.00	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1248 165 5	1.00	85	0.75 1.465 0.75	15 45 75
WB-SB41OFF	1.02	000 000 346 5	1.00	85	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.02	000 1320 000 5	1.00	85	0.75 1.465 0.75	15 45 75
EB-SB41ON	1.02	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	1418	351	1325	0
CAPACITY	veh	2194	1124	1791	921
AVE DELAY	secs	5.1	5.2	11.9	0.0
MAX DELAY	secs	9.1	9.2	24.7	0.0
AVE QUEUE	veh	2	1	4	0
MAX QUEUE	veh	3	1	8	0

AVEDEL s	8.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.9
COST $	103

13:1:09 YEAR 2020 BALLARD/SB 41 RAMP-BYPASS* 107

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1571 362 5	1.00	85	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	000 000 240 0	1.00	85	0.75 1.123 0.75	15 45 75
SB-BALLARD	1.02	000 1371 000 5	1.00	85	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.123 0.75	15 45 75

FLOW	veh	1938	240	1376	0	AVEDEL	s 16.3
CAPACITY	veh	2198	747	1730	977	LOS SIG	B
AVE DELAY	secs	20.0	7.6	12.6	0.0	LOS UNSIG	C
MAX DELAY	secs	40.1	12.4	22.6	0.0		
AVE QUEUE	veh	11	1	5	0	VEHIC HRS	16.1
MAX QUEUE	veh	20	1	8	0	COST	$ 241

13:1:09 YEAR 2020 BALLARD/SB 41 RAMP-SB SEMI* 160

E	(m)	8.00	8.00	4.30	8.00	TIME PERIOD min	90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE min	15
V	(m)	7.31	7.31	3.65	7.31	RESULTS PERIOD min	15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST $/hr	15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD min	15 75
DIA	(m)	55.00	55.00	55.00	55.00	FLOW TYPE pcu/veh	VEH
GRAD SEP		0	0	0	0	FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 0000 165 0	1.00	50	0.75 1.465 0.75	15 45 75
WB-SB41OFF	1.02	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.02	480 0000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
EB-SB41ON	1.02	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	165	0	480	0	AVEDEL s	4.2
CAPACITY	veh	2407	2265	1191	2383	LOS SIG	A
AVE DELAY	secs	1.6	0.0	5.1	0.0	LOS UNSIG	A
MAX DELAY	secs	2.3	0.0	8.1	0.0		
AVE QUEUE	veh	0	0	1	0	VEHIC HRS	0.7
MAX QUEUE	veh	0	0	1	0	COST $	11

13:1:09 YEAR 2020 BALLARD/SB 41 RAMP-SB SEMI* 161

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	PM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 0000 362 0	1.00	50	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	000 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75
SB-BALLARD	1.02	408 0000 000 0	1.00	50	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	362	0	408	0		
CAPACITY	veh	2407	2146	1090	2407		
AVE DELAY	secs	1.7	0.0	5.2	0.0		
MAX DELAY	secs	2.2	0.0	7.0	0.0		
AVE QUEUE	veh	0	0	1	0		
MAX QUEUE	veh	0	0	1	0		

AVEDEL	s	3.6
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		0.8
COST	$	11

13:1:09 YEAR 2020 BALLARD/SB 41 RAMP-SB SEMI* 162

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 0000 165 0	1.00	85	0.75 1.465 0.75	15 45 75
WB-SB41OFF	1.02	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.02	480 0000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
EB-SB41ON	1.02	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	165	0	480	0	AVEDEL	s 5.8
CAPACITY	veh	2202	2062	988	2180	LOS SIG	A
AVE DELAY	secs	1.7	0.0	7.2	0.0	LOS UNSIG	A
MAX DELAY	secs	2.5	0.0	11.9	0.0		
AVE QUEUE	veh	0	0	1	0	VEHIC HRS	1.0
MAX QUEUE	veh	0	0	1	0	COST $	16

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 0000 362 0	1.00	85	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	000 000 000 0	1.00	85	0.75 1.123 0.75	15 45 75
SB-BALLARD	1.02	408 0000 000 0	1.00	85	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.123 0.75	15 45 75

FLOW	veh	362	0	408	0		
CAPACITY	veh	2202	1941	888	2202		
AVE DELAY	secs	1.9	0.0	7.4	0.0		
MAX DELAY	secs	2.4	0.0	10.3	0.0		
AVE QUEUE	veh	0	0	1	0		
MAX QUEUE	veh	0	0	1	0		

AVEDEL s	4.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.0
COST $	16

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E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1248 000 0	1.00	50	0.75 1.465 0.75	15 45 75
WB-SB41OFF	1.02	615 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.02	000 0000 000 5	1.00	50	0.75 1.465 0.75	15 45 75
EB-SB41ON	1.02	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	1248	615	5	0	AVEDEL	s 3.6
CAPACITY	veh	2403	1490	1275	2379	LOS SIG	A
AVE DELAY	secs	3.2	4.5	2.8	0.0	LOS UNSIG	A
MAX DELAY	secs	5.3	8.0	4.0	0.0		
AVE QUEUE	veh	1	1	0	0	VEHIC HRS	1.9
MAX QUEUE	veh	2	1	0	0	COST $	28

13:1:09 YEAR 2020 BALLARD/SB 41 RAMP-WB DUAL SEMI* 161

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1571 000 0	1.00	50	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	450 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75
SB-BALLARD	1.02	000 0000 000 5	1.00	50	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	1571	450	5	0	
CAPACITY	veh	2403	1272	1275	2403	
AVE DELAY	secs	4.4	4.5	2.8	0.0	
MAX DELAY	secs	6.5	6.6	3.5	0.0	
AVE QUEUE	veh	2	1	0	0	
MAX QUEUE	veh	3	1	0	0	

AVEDEL s	4.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.5
COST $	37

13:1:09 YEAR 2020 BALLARD/SB 41 RAMP-WB DUAL SEMI* 162

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1248 000 0	1.00	85	0.75 1.465 0.75	15 45 75
WB-SB41OFF	1.02	615 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.02	000 0000 000 5	1.00	85	0.75 1.465 0.75	15 45 75
EB-SB41ON	1.02	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	1248	615	5	0	
CAPACITY	veh	2198	1287	1072	2176	
AVE DELAY	secs	4.0	6.3	3.3	0.0	
MAX DELAY	secs	6.7	11.7	4.7	0.0	
AVE QUEUE	veh	1	1	0	0	
MAX QUEUE	veh	2	2	0	0	

AVEDEL s	4.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.5
COST $	37

13:1:09 YEAR 2020 BALLARD/SB 41 RAMP-WB DUAL SEMI* 163

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1571 000 0	1.00	85	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	450 000 000 0	1.00	85	0.75 1.123 0.75	15 45 75
SB-BALLARD	1.02	000 0000 000 5	1.00	85	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.123 0.75	15 45 75

FLOW	veh	1571	450	5	0	
CAPACITY	veh	2198	1068	1072	2198	
AVE DELAY	secs	6.0	6.1	3.3	0.0	
MAX DELAY	secs	9.2	9.5	4.1	0.0	
AVE QUEUE	veh	3	1	0	0	
MAX QUEUE	veh	4	1	0	0	

AVEDEL s	6.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.4
COST $	51

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E	(m)	12.00	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	10.97	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	280 965 000 5	1.00	50	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 1.170 0.75	15 45 75
SB-BALLARD	1.01	000 1286 437 5	1.00	50	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.02	434 000 461 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	1250	0	1728	900	
CAPACITY	veh	2380	1415	2400	2042	
AVE DELAY	secs	3.3	0.0	5.7	3.3	
MAX DELAY	secs	4.9	0.0	9.1	5.1	
AVE QUEUE	veh	1	0	3	1	
MAX QUEUE	veh	2	0	4	1	

AVEDEL	s 4.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.7
COST	$ 71

13:1:09 YEAR 2020 BALLARD/NB 41 RAMP-3 LANE* 114

E	(m)	12.00	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	10.97	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	311 1254 000 5	1.00	50	0.75 0.924 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.924 0.75	15 45 75
SB-BALLARD	1.01	000 1188 579 5	1.00	50	0.75 0.924 0.75	15 45 75
EB-NB41OFF	1.01	224 000 804 5	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	1570	0	1772	1033	
CAPACITY	veh	1990	985	2400	2022	
AVE DELAY	secs	9.1	0.0	5.7	3.6	
MAX DELAY	secs	13.6	0.0	7.3	4.7	
AVE QUEUE	veh	4	0	3	1	
MAX QUEUE	veh	6	0	3	1	

AVEDEL	s 6.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.8
COST	$ 117

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E	(m)	12.00	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	10.97	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	280 965 000 5	1.00	85	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 1.170 0.75	15 45 75
SB-BALLARD	1.01	000 1286 437 5	1.00	85	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.02	434 000 461 5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	1250	0	1728	900	
CAPACITY	veh	2175	1210	2195	1839	
AVE DELAY	secs	4.1	0.0	8.9	4.1	
MAX DELAY	secs	6.3	0.0	15.4	6.6	
AVE QUEUE	veh	1	0	4	1	
MAX QUEUE	veh	2	0	7	1	

AVEDEL s	6.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.7
COST $	101

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E	(m)	12.00	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	10.97	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	311 1254 000 5	1.00	85	0.75 0.924 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.924 0.75	15 45 75
SB-BALLARD	1.01	000 1188 579 5	1.00	85	0.75 0.924 0.75	15 45 75
EB-NB41OFF	1.01	224 000 804 5	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	1570	0	1772	1033	
CAPACITY	veh	1785	780	2195	1818	
AVE DELAY	secs	20.4	0.0	8.5	4.6	
MAX DELAY	secs	36.3	0.0	11.6	6.1	
AVE QUEUE	veh	9	0	4	1	
MAX QUEUE	veh	15	0	5	2	

AVEDEL	s 11.8
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	14.4
COST	$ 216

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E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	062 863 036 5	1.00	50	0.75 1.222 0.75	15 45 75
WB-CAPITOL	1.01	150 091 055 5	1.00	50	0.75 1.222 0.75	15 45 75
SB-BALLARD	1.01	271 976 499 5	1.00	50	0.75 1.222 0.75	15 45 75
EB-CAPITOL	1.03	038 132 298 5	1.00	50	0.75 1.222 0.75	15 45 75

FLOW	veh	966	301	1751	473	
CAPACITY	veh	1721	661	2265	1270	
AVE DELAY	secs	5.1	10.9	8.5	4.7	
MAX DELAY	secs	8.1	18.0	15.2	7.5	
AVE QUEUE	veh	1	1	4	1	
MAX QUEUE	veh	2	1	7	1	

AVEDEL s	7.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.0
COST $	105

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E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.04	059 1037 078 5	1.00	50	0.75 0.996 0.75	15 45 75
WB-CAPITOL	1.02	153 025 028 5	1.00	50	0.75 0.996 0.75	15 45 75
SB-BALLARD	1.07	147 916 227 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-CAPITOL	1.03	073 037 342 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	1179	211	1295	457
CAPACITY	veh	1888	505	2170	1474
AVE DELAY	secs	5.1	12.6	4.1	3.5
MAX DELAY	secs	6.9	18.0	5.3	4.5
AVE QUEUE	veh	2	1	2	0
MAX QUEUE	veh	2	1	2	1

AVEDEL s	4.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.3
COST $	65

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E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	062	863	036	5	1.00	85	0.75 1.222 0.75	15 45 75
WB-CAPITOL	1.01	150	091	055	5	1.00	85	0.75 1.222 0.75	15 45 75
SB-BALLARD	1.01	271	976	499	5	1.00	85	0.75 1.222 0.75	15 45 75
EB-CAPITOL	1.03	038	132	298	5	1.00	85	0.75 1.222 0.75	15 45 75

FLOW	veh	966	301	1751	473
CAPACITY	veh	1516	456	2060	1069
AVE DELAY	secs	7.4	37.2	18.3	6.5
MAX DELAY	secs	12.6	74.6	38.0	10.9
AVE QUEUE	veh	2	3	9	1
MAX QUEUE	veh	3	6	17	1

AVEDEL s	15.3
LOS SIG	B
LOS UNSIG	C
VEHIC HRS	14.8
COST $	223

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E	(m)	8.00	4.30	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.04	059 1037 078 5	1.00	85	0.75 0.996 0.75	15 45 75
WB-CAPITOL	1.02	153 025 028 5	1.00	85	0.75 0.996 0.75	15 45 75
SB-BALLARD	1.07	147 916 227 5	1.00	85	0.75 0.996 0.75	15 45 75
EB-CAPITOL	1.03	073 037 342 5	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	1179	211	1295	457	
CAPACITY	veh	1689	302	1977	1274	
AVE DELAY	secs	7.2	56.5	5.2	4.4	
MAX DELAY	secs	10.2	104.1	7.0	5.7	
AVE QUEUE	veh	2	3	2	1	
MAX QUEUE	veh	3	6	2	1	

AVEDEL s	9.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	8.1
COST $	121

14:1:09 YEAR 2035 BALLARD/EVERGREEN-NB/WB BYP* 198

E	(m)	8.00	8.00	12.00			
L'	(m)	25.00	25.00	25.00			
V	(m)	7.31	7.31	10.97			
RAD	(m)	25.00	25.00	25.00			
PHI	(d)	30.00	30.00	30.00			
DIA	(m)	60.00	60.00	60.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000	1431	5	1.00	50	0.75 1.465 0.75	15 45 75
WB-EVRGRN	1.01	000	778	5	1.00	50	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.01	1566	247	5	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	1436	783	1818	AVEDEL	s 5.1
CAPACITY	veh	2230	1418	2894	LOS SIG	A
AVE DELAY	secs	5.1	7.3	4.0	LOS UNSIG	A
MAX DELAY	secs	9.3	14.2	7.5		
AVE QUEUE	veh	2	2	2	VEHIC HRS	5.7
MAX QUEUE	veh	3	3	3	COST $	85

14:1:09 YEAR 2035 BALLARD/EVERGREEN-NB/WB BYP* 199

E	(m)	8.00	8.00	12.00		TIME PERIOD	min	90		
L'	(m)	25.00	25.00	25.00		TIME SLICE	min	15		
V	(m)	7.31	7.31	10.97		RESULTS PERIOD	min	15	75	
RAD	(m)	25.00	25.00	25.00		TIME COST	$/hr	15.00		
PHI	(d)	30.00	30.00	30.00		FLOW PERIOD	min	15	75	
DIA	(m)	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH		
GRAD SEP		0	0	0		FLOW PEAK	am/op/pm	PM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	0000 1423 5	1.00	50	0.75 0.830 0.75	15 45 75
WB-EVRGRN	1.01	000 1025 5	1.00	50	0.75 0.830 0.75	15 45 75
SB-BALLARD	1.01	1188 173 5	1.00	50	0.75 0.830 0.75	15 45 75

FLOW	veh	1428	1030	1366	AVEDEL	s	4.9
CAPACITY	veh	2281	1423	2673	LOS SIG		A
AVE DELAY	secs	4.1	8.9	2.7	LOS UNSIG		A
MAX DELAY	secs	4.6	10.8	3.0			
AVE QUEUE	veh	2	3	1	VEHIC HRS		5.2
MAX QUEUE	veh	2	3	1	COST	$	78

14:1:09 YEAR 2035 BALLARD/EVERGREEN-NB/WB BYP* 200

E	(m)	8.00	8.00	12.00	TIME PERIOD	min	90
L'	(m)	25.00	25.00	25.00	TIME SLICE	min	15
V	(m)	7.31	7.31	10.97	RESULTS PERIOD	min	15 75
RAD	(m)	25.00	25.00	25.00	TIME COST	$/hr	15.00
PHI	(d)	30.00	30.00	30.00	FLOW PERIOD	min	15 75
DIA	(m)	60.00	60.00	60.00	FLOW TYPE	pcu/veh	VEH
GRAD SEP		0	0	0	FLOW PEAK	am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1431 5	1.00	85	0.75 1.465 0.75	15 45 75
WB-EVRGRN	1.01	000 778 5	1.00	85	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.01	1566 247 5	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	1436	783	1818	AVEDEL	s	8.1
CAPACITY	veh	2025	1213	2689	LOS SIG		A
AVE DELAY	secs	7.7	14.8	5.4	LOS UNSIG		A
MAX DELAY	secs	14.9	32.0	10.7			
AVE QUEUE	veh	3	3	3	VEHIC HRS		9.0
MAX QUEUE	veh	5	6	5	COST	$	136

14:1:09 YEAR 2035 BALLARD/EVERGREEN-NB/WB BYP* 201

E	(m)	8.00	8.00	12.00		TIME PERIOD	min	90			
L'	(m)	25.00	25.00	25.00		TIME SLICE	min	15			
V	(m)	7.31	7.31	10.97		RESULTS PERIOD	min	15	75		
RAD	(m)	25.00	25.00	25.00		TIME COST	$/hr	15.00			
PHI	(d)	30.00	30.00	30.00		FLOW PERIOD	min	15	75		
DIA	(m)	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH			
GRAD SEP		0	0	0		FLOW PEAK	am/op/pm	PM			

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	0000 1423 5	1.00	85	0.75 0.830 0.75	15 45 75
WB-EVRGRN	1.01	000 1025 5	1.00	85	0.75 0.830 0.75	15 45 75
SB-BALLARD	1.01	1188 173 5	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	1428	1030	1366		AVEDEL	s	8.1
CAPACITY	veh	2076	1218	2469		LOS SIG		A
AVE DELAY	secs	5.4	18.3	3.2		LOS UNSIG		A
MAX DELAY	secs	6.2	24.6	3.6				
AVE QUEUE	veh	2	5	1		VEHIC HRS		8.6
MAX QUEUE	veh	2	7	1		COST	$	129

14:1:09 YEAR 2035 BALLARD/SB 41 RAMP-BYP* 167

E	(m)	12.00	8.00	12.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	10.97	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000	1318	186	5	1.00	50	0.75 1.465 0.75	15 45 75
WB-SB41OFF	1.02	000	000	381	5	1.00	50	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.02	532	1811	000	5	1.00	50	0.75 1.465 0.75	15 45 75
EB-SB41ON	1.02	000	000	000	0	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	1509	386	2348	0
CAPACITY	veh	3094	1354	3049	193
AVE DELAY	secs	2.3	4.0	9.2	0.0
MAX DELAY	secs	3.8	6.8	19.7	0.0
AVE QUEUE	veh	1	0	6	0
MAX QUEUE	veh	1	1	11	0

AVEDEL	s 6.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.4
COST	$ 111

14:1:09 YEAR 2035 BALLARD/SB 41 RAMP-BYP* 168

E	(m)	12.00	8.00	12.00	4.30		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	7.31	7.31	10.97	3.65		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	60.00	60.00	60.00	60.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1851 408 5	1.00	50	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	000 000 270 0	1.00	50	0.75 1.123 0.75	15 45 75
SB-BALLARD	1.02	460 1674 000 5	1.00	50	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	2264	270	2139	0		
CAPACITY	veh	3098	850	2959	321		
AVE DELAY	secs	4.6	6.8	4.9	0.0		
MAX DELAY	secs	7.1	10.9	7.9	0.0		
AVE QUEUE	veh	3	1	3	0		
MAX QUEUE	veh	4	1	4	0		

AVEDEL	s 4.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.3
COST	$ 94

14:1:09 YEAR 2035 BALLARD/SB 41 RAMP-BYP* 169

E	(m)	12.00	8.00	12.00	4.30		TIME PERIOD	min	90		
L'	(m)	25.00	25.00	25.00	25.00		TIME SLICE	min	15		
V	(m)	7.31	7.31	10.97	3.65		RESULTS PERIOD	min	15	75	
RAD	(m)	25.00	25.00	25.00	25.00		TIME COST	$/hr	15.00		
PHI	(d)	30.00	30.00	30.00	30.00		FLOW PERIOD	min	15	75	
DIA	(m)	60.00	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH		
GRAD SEP		0	0	0	0		FLOW PEAK	am/op/pm	AM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-BALLARD	1.01	000	1318	186	5	1.00	85	0.75	1.465	0.75	15	45	75
WB-SB41OFF	1.02	000	000	381	5	1.00	85	0.75	1.465	0.75	15	45	75
SB-BALLARD	1.02	532	1811	000	5	1.00	85	0.75	1.465	0.75	15	45	75
EB-SB41ON	1.02	000	000	000	0	1.00	85	0.75	1.465	0.75	15	45	75

FLOW	veh	1509	386	2348	0		AVEDEL	s 13.6
CAPACITY	veh	2889	1151	2846	76		LOS SIG	B
AVE DELAY	secs	2.7	5.2	22.0	0.0		LOS UNSIG	B
MAX DELAY	secs	4.4	9.3	54.0	0.0			
AVE QUEUE	veh	1	1	14	0		VEHIC HRS	16.0
MAX QUEUE	veh	2	1	31	0		COST	$ 241

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E	(m)	12.00	8.00	12.00	4.30		TIME PERIOD	min	90		
L'	(m)	25.00	25.00	25.00	25.00		TIME SLICE	min	15		
V	(m)	7.31	7.31	10.97	3.65		RESULTS PERIOD	min	15	75	
RAD	(m)	25.00	25.00	25.00	25.00		TIME COST	$/hr	15.00		
PHI	(d)	30.00	30.00	30.00	30.00		FLOW PERIOD	min	15	75	
DIA	(m)	60.00	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH		
GRAD SEP		0	0	0	0		FLOW PEAK	am/op/pm	PM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-BALLARD	1.01	000	1851	408	5	1.00	85	0.75	1.123	0.75	15	45	75
WB-SB41OFF	1.01	000	000	270	0	1.00	85	0.75	1.123	0.75	15	45	75
SB-BALLARD	1.02	460	1674	000	5	1.00	85	0.75	1.123	0.75	15	45	75
EB-SB41ON	1.01	000	000	000	0	1.00	85	0.75	1.123	0.75	15	45	75

FLOW	veh	2264	270	2139	0		AVEDEL s	7.0
CAPACITY	veh	2893	645	2756	117		LOS SIG	A
AVE DELAY	secs	6.4	12.3	7.0	0.0		LOS UNSIG	A
MAX DELAY	secs	10.5	21.9	12.2	0.0			
AVE QUEUE	veh	4	1	4	0		VEHIC HRS	9.1
MAX QUEUE	veh	6	2	7	0		COST $	137

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E	(m)	8.00	8.00	12.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	10.97	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1318 000 0	1.00	50	0.75 1.465 0.75	15 45 75
WB-SB41OFF	1.02	620 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.02	000 0000 000 5	1.00	50	0.75 1.465 0.75	15 45 75
EB-SB41ON	1.02	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	1318	620	5	0	AVEDEL	s 3.8
CAPACITY	veh	2403	1484	3564	2379	LOS SIG	A
AVE DELAY	secs	3.4	4.6	1.0	0.0	LOS UNSIG	A
MAX DELAY	secs	5.8	8.1	1.4	0.0		
AVE QUEUE	veh	1	1	0	0	VEHIC HRS	2.1
MAX QUEUE	veh	2	1	0	0	COST	$ 31

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E	(m)	8.00	8.00	12.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	10.97	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1851 000 0	1.00	50	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	507 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75
SB-BALLARD	1.02	000 0000 000 5	1.00	50	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	1851	507	5	0	AVEDEL	s 6.9
CAPACITY	veh	2403	1134	3564	2403	LOS SIG	A
AVE DELAY	secs	7.1	6.1	1.0	0.0	LOS UNSIG	A
MAX DELAY	secs	11.6	9.7	1.2	0.0		
AVE QUEUE	veh	4	1	0	0	VEHIC HRS	4.5
MAX QUEUE	veh	5	1	0	0	COST	$ 68

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E (m)	8.00	8.00	12.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	7.31	10.97	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1318 000 0	1.00	85	0.75 1.465 0.75	15 45 75
WB-SB41OFF	1.02	620 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
SB-BALLARD	1.02	000 0000 000 5	1.00	85	0.75 1.465 0.75	15 45 75
EB-SB41ON	1.02	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	1318	620	5	0	
CAPACITY	veh	2198	1281	3361	2177	
AVE DELAY	secs	4.4	6.5	1.0	0.0	
MAX DELAY	secs	7.5	12.0	1.5	0.0	
AVE QUEUE	veh	2	1	0	0	
MAX QUEUE	veh	2	2	0	0	

AVEDEL s	5.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.7
COST $	41

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E (m)	8.00	8.00	12.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	7.31	10.97	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 1851 000 0	1.00	85	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	507 000 000 0	1.00	85	0.75 1.123 0.75	15 45 75
SB-BALLARD	1.02	000 0000 000 5	1.00	85	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.123 0.75	15 45 75

FLOW	veh	1851	507	5	0
CAPACITY	veh	2198	929	3361	2198
AVE DELAY	secs	12.9	10.0	1.1	0.0
MAX DELAY	secs	23.5	17.2	1.3	0.0
AVE QUEUE	veh	7	1	0	0
MAX QUEUE	veh	11	2	0	0

AVEDEL s	12.3
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	8.0
COST $	121

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E	(m)	12.00	4.30	12.00	12.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	10.97	3.65	10.97	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	25.00	25.00	30.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	314 1061 000 5	1.00	50	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 1.170 0.75	15 45 75
SB-BALLARD	1.01	000 1562 465 5	1.00	50	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.02	489 000 566 0	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	1380	0	2032	1055	AVEDEL s	6.1
CAPACITY	veh	2684	482	3594	1452	LOS SIG	A
AVE DELAY	secs	2.8	0.0	2.3	17.6	LOS UNSIG	A
MAX DELAY	secs	4.2	0.0	3.3	36.2		
AVE QUEUE	veh	1	0	1	5	VEHIC HRS	7.5
MAX QUEUE	veh	1	0	2	10	COST $	113

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E	(m)	12.00	4.30	12.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	3.65	10.97	7.31	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	351	1353	000	5	1.00	50	0.75 0.924 0.75	15 45 75
WB-NB41ON	1.01	000	000	000	0	1.00	50	0.75 0.924 0.75	15 45 75
SB-BALLARD	1.01	000	1198	700	5	1.00	50	0.75 0.924 0.75	15 45 75
EB-NB41OFF	1.01	253	000	906	0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	1709	0	1903	1159
CAPACITY	veh	2172	175	3594	1571
AVE DELAY	secs	8.4	0.0	2.1	9.4
MAX DELAY	secs	12.7	0.0	2.5	14.1
AVE QUEUE	veh	4	0	1	3
MAX QUEUE	veh	6	0	1	4

AVEDEL s	6.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	8.1
COST $	122

14:1:09 YEAR 2035 BALLARD/NB 41 RAMP-3 LANE* 159

E	(m)	12.00	4.30	12.00	12.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	10.97	3.65	10.97	10.97	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	25.00	25.00	30.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	314 1061 000 5	1.00	85	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 1.170 0.75	15 45 75
SB-BALLARD	1.01	000 1562 465 5	1.00	85	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.02	489 000 566 0	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	1380	0	2032	1055	AVEDEL	s 4.9
CAPACITY	veh	2479	277	3389	1567	LOS SIG	A
AVE DELAY	secs	3.4	0.0	2.7	11.0	LOS UNSIG	A
MAX DELAY	secs	5.3	0.0	3.9	21.2		
AVE QUEUE	veh	1	0	2	3	VEHIC HRS	6.0
MAX QUEUE	veh	2	0	2	6	COST	$ 91

14:1:09 YEAR 2035 BALLARD/NB 41 RAMP-3 LANE* 160

E	(m)	12.00	4.30	12.00	12.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	10.97	3.65	10.97	10.97	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	25.00	25.00	30.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	351 1353 000 5	1.00	85	0.75 0.924 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.924 0.75	15 45 75
SB-BALLARD	1.01	000 1198 700 5	1.00	85	0.75 0.924 0.75	15 45 75
EB-NB41OFF	1.01	253 000 906 0	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	1709	0	1903	1159	AVEDEL s	9.0
CAPACITY	veh	1967	12	3389	1699	LOS SIG	A
AVE DELAY	secs	17.6	0.0	2.4	7.0	LOS UNSIG	A
MAX DELAY	secs	31.4	0.0	2.9	10.0		
AVE QUEUE	veh	9	0	1	2	VEHIC HRS	11.9
MAX QUEUE	veh	14	0	1	3	COST $	178

14:1:09 YEAR 2035 BALLARD/CAPITOL-BYP* 111

E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	070 973 040 5	1.00	50	0.75 1.222 0.75	15 45 75
WB-CAPITOL	1.01	000 170 062 5	1.00	50	0.75 1.222 0.75	15 45 75
SB-BALLARD	1.01	000 1149 562 5	1.00	50	0.75 1.222 0.75	15 45 75
EB-CAPITOL	1.03	068 194 330 5	1.00	50	0.75 1.222 0.75	15 45 75

FLOW	veh	1088	237	1716	597
CAPACITY	veh	1607	586	2200	1098
AVE DELAY	secs	8.4	11.3	9.3	8.8
MAX DELAY	secs	15.1	18.9	17.0	15.9
AVE QUEUE	veh	3	1	5	2
MAX QUEUE	veh	4	1	7	2

AVEDEL s	9.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	9.2
COST $	138

14:1:09 YEAR 2035 BALLARD/CAPITOL-BYP* 112

E	(m)	8.00	4.30	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	3.65	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	55.00	55.00	55.00	55.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.04	067 1081 088 5	1.00	50	0.75 0.996 0.75	15 45 75
WB-CAPITOL	1.02	000 029 031 5	1.00	50	0.75 0.996 0.75	15 45 75
SB-BALLARD	1.07	000 969 256 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-CAPITOL	1.03	111 043 385 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	1241	65	1230	544	AVEDEL s	4.9
CAPACITY	veh	1832	454	2158	1411	LOS SIG	A
AVE DELAY	secs	6.2	9.3	3.8	4.1	LOS UNSIG	A
MAX DELAY	secs	8.7	12.5	4.9	5.4		
AVE QUEUE	veh	2	0	1	1	VEHIC HRS	4.2
MAX QUEUE	veh	3	0	2	1	COST $	63

14:1:09 YEAR 2035 BALLARD/CAPITOL-BYP* 113

E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	070 973 040 5	1.00	85	0.75 1.222 0.75	15 45 75
WB-CAPITOL	1.01	000 170 062 5	1.00	85	0.75 1.222 0.75	15 45 75
SB-BALLARD	1.01	000 1149 562 5	1.00	85	0.75 1.222 0.75	15 45 75
EB-CAPITOL	1.03	068 194 330 5	1.00	85	0.75 1.222 0.75	15 45 75

FLOW	veh	1088	237	1716	597
CAPACITY	veh	1402	381	1995	898
AVE DELAY	secs	18.1	40.7	21.8	19.5
MAX DELAY	secs	37.5	84.4	46.8	41.1
AVE QUEUE	veh	6	3	11	3
MAX QUEUE	veh	10	5	21	6

AVEDEL s	21.5
LOS SIG	C
LOS UNSIG	C
VEHIC HRS	21.8
COST $	326

14:1:09 YEAR 2035 BALLARD/CAPITOL-BYP* 114

E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.04	067 1081 088 5	1.00	85	0.75 0.996 0.75	15 45 75
WB-CAPITOL	1.02	000 029 031 5	1.00	85	0.75 0.996 0.75	15 45 75
SB-BALLARD	1.07	000 969 256 5	1.00	85	0.75 0.996 0.75	15 45 75
EB-CAPITOL	1.03	111 043 385 5	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	1241	65	1230	544
CAPACITY	veh	1633	251	1965	1210
AVE DELAY	secs	9.7	20.8	4.8	5.4
MAX DELAY	secs	14.7	31.9	6.4	7.3
AVE QUEUE	veh	3	0	2	1
MAX QUEUE	veh	5	1	2	1

AVEDEL s	7.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.2
COST $	93

14:1:09 YEAR 2035 BALLARD/CAPITOL-SB SEMI* 100

E	(m)	8.00	4.30	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	7.31	
RAD	(m)	25.00	25.00	30.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 000 040 0	1.00	50	0.75 1.222 0.75	15 45 75
WB-CAPITOL	1.01	000 170 000 0	1.00	50	0.75 1.222 0.75	15 45 75
SB-BALLARD	1.01	305 0000 000 0	1.00	50	0.75 1.222 0.75	15 45 75
EB-CAPITOL	1.03	000 000 000 5	1.00	50	0.75 1.222 0.75	15 45 75

FLOW	veh	40	170	305	5	
CAPACITY	veh	2403	1264	1184	2360	
AVE DELAY	secs	1.5	3.2	4.0	1.5	
MAX DELAY	secs	1.9	4.3	5.5	1.9	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL	s 3.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.5
COST	$ 8

14:1:09 YEAR 2035 BALLARD/CAPITOL-SB SEMI* 101

E	(m)	8.00	4.30	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	7.31	3.65	3.65	7.31		
RAD	(m)	25.00	25.00	30.00	25.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	55.00	55.00	55.00	55.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.04	000 0000 088 0	1.00	50	0.75 0.996 0.75	15 45 75
WB-CAPITOL	1.02	000 029 000 0	1.00	50	0.75 0.996 0.75	15 45 75
SB-BALLARD	1.07	179 0000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
EB-CAPITOL	1.03	000 000 000 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	88	29	179	5		
CAPACITY	veh	2334	1226	1162	2360		
AVE DELAY	secs	1.6	3.0	3.6	1.5		
MAX DELAY	secs	1.9	3.5	4.3	1.8		
AVE QUEUE	veh	0	0	0	0		
MAX QUEUE	veh	0	0	0	0		

AVEDEL	s 2.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.2
COST	$ 4

14:1:09 YEAR 2035 BALLARD/CAPITOL-SB SEMI* 102

E (m)	8.00	4.30	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	3.65	7.31
RAD (m)	25.00	25.00	30.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 000 040 0	1.00	85	0.75 1.222 0.75	15 45 75
WB-CAPITOL	1.01	000 170 000 0	1.00	85	0.75 1.222 0.75	15 45 75
SB-BALLARD	1.01	305 0000 000 0	1.00	85	0.75 1.222 0.75	15 45 75
EB-CAPITOL	1.03	000 000 000 5	1.00	85	0.75 1.222 0.75	15 45 75

FLOW	veh	40	170	305	5
CAPACITY	veh	2198	1059	980	2159
AVE DELAY	secs	1.6	4.0	5.2	1.6
MAX DELAY	secs	2.1	5.3	7.3	2.1
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	1	0

AVEDEL s	4.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.7
COST $	10

14:1:09 YEAR 2035 BALLARD/CAPITOL-SB SEMI* 103

E (m)	8.00	4.30	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	3.65	7.31
RAD (m)	25.00	25.00	30.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.04	000 0000 088 0	1.00	85	0.75 0.996 0.75	15 45 75
WB-CAPITOL	1.02	000 029 000 0	1.00	85	0.75 0.996 0.75	15 45 75
SB-BALLARD	1.07	179 0000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
EB-CAPITOL	1.03	000 000 000 5	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	88	29	179	5
CAPACITY	veh	2134	1023	969	2159
AVE DELAY	secs	1.7	3.6	4.5	1.6
MAX DELAY	secs	2.0	4.2	5.3	1.9
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL s	3.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.3
COST $	4

14:1:09 YEAR 2035 BALLARD/CAPITOL-WB SEMI* 96

E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	30.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 973 000 0	1.00	50	0.75 1.222 0.75	15 45 75
WB-CAPITOL	1.01	169 000 000 0	1.00	50	0.75 1.222 0.75	15 45 75
SB-BALLARD	1.01	000 0000 000 5	1.00	50	0.75 1.222 0.75	15 45 75
EB-CAPITOL	1.03	000 000 330 0	1.00	50	0.75 1.222 0.75	15 45 75

FLOW	veh	973	169	5	330
CAPACITY	veh	2161	611	2422	2356
AVE DELAY	secs	3.0	8.5	1.5	1.7
MAX DELAY	secs	4.4	13.3	1.9	2.3
AVE QUEUE	veh	1	0	0	0
MAX QUEUE	veh	1	1	0	0

AVEDEL s	3.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST $	21

14:1:09 YEAR 2035 BALLARD/CAPITOL-WB SEMI* 97

E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	30.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.04	000 1081 000 0	1.00	50	0.75 0.996 0.75	15 45 75
WB-CAPITOL	1.02	171 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
SB-BALLARD	1.07	000 000 000 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-CAPITOL	1.03	000 000 385 0	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	1081	171	5	385
CAPACITY	veh	2059	505	2286	2356
AVE DELAY	secs	3.6	10.9	1.6	1.8
MAX DELAY	secs	4.7	15.2	1.8	2.1
AVE QUEUE	veh	1	1	0	0
MAX QUEUE	veh	1	1	0	0

AVEDEL s	4.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST $	27

14:1:09 YEAR 2035 BALLARD/CAPITOL-WB SEMI* 98

E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	30.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.01	000 973 000 0	1.00	85	0.75 1.222 0.75	15 45 75
WB-CAPITOL	1.01	169 000 000 0	1.00	85	0.75 1.222 0.75	15 45 75
SB-BALLARD	1.01	000 0000 000 5	1.00	85	0.75 1.222 0.75	15 45 75
EB-CAPITOL	1.03	000 000 330 0	1.00	85	0.75 1.222 0.75	15 45 75

FLOW	veh	973	169	5	330
CAPACITY	veh	1956	406	2217	2155
AVE DELAY	secs	3.7	18.3	1.6	1.9
MAX DELAY	secs	5.5	32.1	2.1	2.6
AVE QUEUE	veh	1	1	0	0
MAX QUEUE	veh	1	1	0	0

AVEDEL s	5.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST $	31

14:1:09 YEAR 2035 BALLARD/CAPITOL-WB SEMI* 99

E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	30.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BALLARD	1.04	000 1081 000 0	1.00	85	0.75 0.996 0.75	15 45 75
WB-CAPITOL	1.02	171 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
SB-BALLARD	1.07	000 000 000 5	1.00	85	0.75 0.996 0.75	15 45 75
EB-CAPITOL	1.03	000 000 385 0	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	1081	171	5	385
CAPACITY	veh	1860	302	2093	2155
AVE DELAY	secs	4.6	33.1	1.7	2.0
MAX DELAY	secs	6.0	55.3	2.0	2.4
AVE QUEUE	veh	1	2	0	0
MAX QUEUE	veh	2	3	0	0

AVEDEL s	6.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.2
COST $	47

12:1:09 COLLEGE AVE / KENSINGTON DR - 2020 2 LN* 118

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB KNSGTN	1.01	101 105 076 0	1.00	50	0.75 1.078 0.75	15 45 75
WB COLLEG	1.02	230 810 122 0	1.00	50	0.75 1.078 0.75	15 45 75
SB KNSGTN	1.01	038 075 240 0	1.00	50	0.75 1.078 0.75	15 45 75
EB COLLEG	1.01	014 392 055 0	1.00	50	0.75 1.078 0.75	15 45 75

FLOW	veh	282	1162	353	461	
CAPACITY	veh	1497	2208	1644	2078	
AVE DELAY	secs	2.9	3.4	2.7	2.2	
MAX DELAY	secs	3.7	4.6	3.6	2.8	
AVE QUEUE	veh	0	1	0	0	
MAX QUEUE	veh	0	1	0	0	

AVEDEL	s 3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.9
COST	$ 28

12:1:09 COLLEGE AVE / KENSINGTON DR - 2020 2 LN* 119

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD min	90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE min	15
V	(m)	3.65	7.31	7.31	7.31	RESULTS PERIOD min	15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST $/hr	15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD min	15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE pcu/veh	VEH
GRAD SEP		0	0	0	0	FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB KNSGTN	1.01	186 156 055 0	1.00	50	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	390 603 173 0	1.00	50	0.75 0.924 0.75	15 45 75
SB KNSGTN	1.01	056 138 383 0	1.00	50	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	049 1036 115 0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	397	1166	577	1200	AVEDEL s	4.4
CAPACITY	veh	936	2162	1784	1886	LOS SIG	A
AVE DELAY	secs	6.6	3.6	2.9	5.2	LOS UNSIG	A
MAX DELAY	secs	8.5	4.3	3.5	6.6		
AVE QUEUE	veh	1	1	0	2	VEHIC HRS	4.1
MAX QUEUE	veh	1	1	1	2	COST $	61

12:1:09 COLLEGE AVE / KENSINGTON DR - 2020 2 LN* 120

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB KNSGTN	1.01	101 105 076 0	1.00	85	0.75 1.078 0.75	15 45 75
WB COLLEG	1.02	230 810 122 0	1.00	85	0.75 1.078 0.75	15 45 75
SB KNSGTN	1.01	038 075 240 0	1.00	85	0.75 1.078 0.75	15 45 75
EB COLLEG	1.01	014 392 055 0	1.00	85	0.75 1.078 0.75	15 45 75

FLOW	veh	282	1162	353	461
CAPACITY	veh	1292	2005	1439	1873
AVE DELAY	secs	3.5	4.3	3.3	2.5
MAX DELAY	secs	4.6	5.9	4.4	3.2
AVE QUEUE	veh	0	1	0	0
MAX QUEUE	veh	0	2	0	0

AVEDEL	s 3.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.3
COST	$ 34

12:1:09 COLLEGE AVE / KENSINGTON DR - 2020 2 LN* 121

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB KNSGTN	1.01	186 156 055 0	1.00	85	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	390 603 173 0	1.00	85	0.75 0.924 0.75	15 45 75
SB KNSGTN	1.01	056 138 383 0	1.00	85	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	049 1036 115 0	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	397	1166	577	1200	
CAPACITY	veh	731	1957	1579	1681	
AVE DELAY	secs	10.9	4.5	3.5	7.5	
MAX DELAY	secs	14.9	5.5	4.2	10.0	
AVE QUEUE	veh	1	1	1	3	
MAX QUEUE	veh	2	2	1	3	

AVEDEL s	6.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.7
COST $	86

12:1:09 COLLEGE AVE / 441 SB RAMPS - 2020 BYPS* 71

E	(m)	4.30	8.00	8.00	12.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	7.31	7.31		
RAD	(m)	25.00	25.00	25.00	30.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	60.00	60.00	60.00	60.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
WB COLLEG	1.01	000 867 552 0	1.00	50	0.75 0.996 0.75	15 45 75
SB 441 S	1.01	000 000 517 0	1.00	50	0.75 0.996 0.75	15 45 75
EB COLLEG	1.01	224 515 000 0	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	0	1419	517	739		
CAPACITY	veh	781	2407	1433	2253		
AVE DELAY	secs	0.0	3.6	3.9	2.3		
MAX DELAY	secs	0.0	4.6	5.1	3.0		
AVE QUEUE	veh	0	1	1	0		
MAX QUEUE	veh	0	2	1	1		

AVEDEL s	3.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.5
COST $	37

12:1:09 COLLEGE AVE / 441 SB RAMPS - 2020 BYPS* 72

E	(m)	4.30	8.00	8.00	12.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	30.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
WB COLLEG	1.02	000 774 388 0	1.00	50	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 990 0	1.00	50	0.75 0.891 0.75	15 45 75
EB COLLEG	1.01	164 1422 000 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	0	1162	990	1586	AVEDEL s	6.2
CAPACITY	veh	105	2383	1601	1999	LOS SIG	A
AVE DELAY	secs	0.0	2.9	5.8	8.9	LOS UNSIG	A
MAX DELAY	secs	0.0	3.3	7.3	12.6		
AVE QUEUE	veh	0	1	2	4	VEHIC HRS	6.5
MAX QUEUE	veh	0	1	2	5	COST $	97

12:1:09 COLLEGE AVE / 441 SB RAMPS - 2020 BYPS* 73

E	(m)	4.30	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
WB COLLEG	1.01	000 867 552 0	1.00	85	0.75 0.996 0.75	15 45 75
SB 441 S	1.01	000 000 517 0	1.00	85	0.75 0.996 0.75	15 45 75
EB COLLEG	1.01	224 515 000 0	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	0	1419	517	739
CAPACITY	veh	577	2202	1228	2048
AVE DELAY	secs	0.0	4.6	5.1	2.7
MAX DELAY	secs	0.0	6.0	6.8	3.5
AVE QUEUE	veh	0	2	1	1
MAX QUEUE	veh	0	2	1	1

AVEDEL s	4.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.1
COST $	46

12:1:09 COLLEGE AVE / 441 SB RAMPS - 2020 BYPS* 74

E	(m)	4.30	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
WB COLLEG	1.02	000 774 388 0	1.00	85	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 990 0	1.00	85	0.75 0.891 0.75	15 45 75
EB COLLEG	1.01	164 1422 000 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	0	1162	990	1586
CAPACITY	veh	4	2180	1396	1794
AVE DELAY	secs	0.0	3.5	8.8	19.1
MAX DELAY	secs	0.0	4.0	11.6	31.8
AVE QUEUE	veh	0	1	2	9
MAX QUEUE	veh	0	1	3	14

AVEDEL s	11.5
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	11.9
COST $	179

12:1:09 COLLEGE AVE / 441 SB RAMPS - 2020 SB SEMI* 50

E	(m)	4.30	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
WB COLLEG	1.01	000 867 000 0	1.00	50	0.75 0.996 0.75	15 45 75
SB 441 S	1.01	305 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
EB COLLEG	1.01	000 000 000 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	0	867	305	5	
CAPACITY	veh	1285	2403	860	3599	
AVE DELAY	secs	0.0	2.3	6.4	1.0	
MAX DELAY	secs	0.0	2.8	8.2	1.2	
AVE QUEUE	veh	0	1	1	0	
MAX QUEUE	veh	0	1	1	0	

AVEDEL	s 3.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST	$ 16

12:1:09 COLLEGE AVE / 441 SB RAMPS - 2020 SB SEMI* 51

E	(m)	4.30	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
WB COLLEG	1.02	000 774 000 0	1.00	50	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	412 000 0000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB COLLEG	1.01	000 0000 000 5	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	0	774	412	5	
CAPACITY	veh	1285	2380	902	3599	
AVE DELAY	secs	0.0	2.2	7.2	1.0	
MAX DELAY	secs	0.0	2.5	8.5	1.1	
AVE QUEUE	veh	0	0	1	0	
MAX QUEUE	veh	0	1	1	0	

AVEDEL s	3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	20

12:1:09 COLLEGE AVE / 441 SB RAMPS - 2020 SB SEMI* 52

E	(m)	4.30	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
WB COLLEG	1.01	000 867 000 0	1.00	85	0.75 0.996 0.75	15 45 75
SB 441 S	1.01	305 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
EB COLLEG	1.01	000 000 000 5	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	0	867	305	5
CAPACITY	veh	1080	2198	655	3394
AVE DELAY	secs	0.0	2.7	10.2	1.0
MAX DELAY	secs	0.0	3.3	13.7	1.2
AVE QUEUE	veh	0	1	1	0
MAX QUEUE	veh	0	1	1	0

AVEDEL	s 4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.5
COST	$ 23

12:1:09 COLLEGE AVE / 441 SB RAMPS - 2020 SB SEMI* 53

E	(m)	4.30	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
WB COLLEG	1.02	000 774 000 0	1.00	85	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	412 000 0000 0	1.00	85	0.75 0.891 0.75	15 45 75
EB COLLEG	1.01	000 0000 000 5	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	0	774	412	5	
CAPACITY	veh	1080	2177	697	3394	
AVE DELAY	secs	0.0	2.5	12.3	1.1	
MAX DELAY	secs	0.0	2.9	15.3	1.2	
AVE QUEUE	veh	0	1	1	0	
MAX QUEUE	veh	0	1	2	0	

AVEDEL s	5.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST $	29

12:1:09 COLLEGE AVE / 441 NB RAMPS - 2020 BYP* 134

E	(m)	8.00	8.00	4.30	12.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	7.31	7.31	3.65	10.97		
RAD	(m)	25.00	25.00	25.00	30.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	60.00	60.00	60.00	60.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	000 000 100 0	1.00	50	0.75 1.123 0.75	15 45 75
WB COLLEG	1.01	0000 1347 000 0	1.00	50	0.75 1.123 0.75	15 45 75
SB 441 N	1.01	000 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75
EB COLLEG	1.01	000 736 309 0	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	100	1347	0	1045
CAPACITY	veh	1689	2126	578	3622
AVE DELAY	secs	2.2	4.7	0.0	1.4
MAX DELAY	secs	2.9	7.1	0.0	1.8
AVE QUEUE	veh	0	2	0	0
MAX QUEUE	veh	0	2	0	0

AVEDEL	s 3.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.2
COST	$ 33

12:1:09 COLLEGE AVE / 441 NB RAMPS - 2020 BYP* 135

E	(m)	8.00	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	000 000 269 0	1.00	50	0.75 1.036 0.75	15 45 75
WB COLLEG	1.01	000 827 000 0	1.00	50	0.75 1.036 0.75	15 45 75
SB 441 N	1.01	000 000 000 0	1.00	50	0.75 1.036 0.75	15 45 75
EB COLLEG	1.01	000 2077 271 0	1.00	50	0.75 1.036 0.75	15 45 75

FLOW	veh	269	827	0	2348
CAPACITY	veh	796	2036	750	3622
AVE DELAY	secs	7.3	2.9	0.0	2.8
MAX DELAY	secs	11.1	3.8	0.0	3.9
AVE QUEUE	veh	1	1	0	2
MAX QUEUE	veh	1	1	0	2

AVEDEL	s 3.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.1
COST	$ 46

12:1:09 COLLEGE AVE / 441 NB RAMPS - 2020 BYP* 136

E	(m)	8.00	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	000 000 100 0	1.00	85	0.75 1.123 0.75	15 45 75
WB COLLEG	1.01	0000 1347 000 0	1.00	85	0.75 1.123 0.75	15 45 75
SB 441 N	1.01	000 000 000 0	1.00	85	0.75 1.123 0.75	15 45 75
EB COLLEG	1.01	000 736 309 0	1.00	85	0.75 1.123 0.75	15 45 75

FLOW	veh	100	1347	0	1045
CAPACITY	veh	1485	1921	373	3417
AVE DELAY	secs	2.6	6.7	0.0	1.5
MAX DELAY	secs	3.4	10.4	0.0	1.9
AVE QUEUE	veh	0	3	0	0
MAX QUEUE	veh	0	4	0	1

AVEDEL	s 4.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.0
COST	$ 45

12:1:09 COLLEGE AVE / 441 NB RAMPS - 2020 BYP* 137

E	(m)	8.00	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	000 000 269 0	1.00	85	0.75 1.036 0.75	15 45 75
WB COLLEG	1.01	000 827 000 0	1.00	85	0.75 1.036 0.75	15 45 75
SB 441 N	1.01	000 000 000 0	1.00	85	0.75 1.036 0.75	15 45 75
EB COLLEG	1.01	000 2077 271 0	1.00	85	0.75 1.036 0.75	15 45 75

FLOW	veh	269	827	0	2348
CAPACITY	veh	591	1831	545	3417
AVE DELAY	secs	14.0	3.5	0.0	3.4
MAX DELAY	secs	23.6	4.6	0.0	4.8
AVE QUEUE	veh	1	1	0	2
MAX QUEUE	veh	2	1	0	3

AVEDEL	s 4.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.1
COST	$ 61

12:1:09 COLLEGE AVE / EISENHOWER - 2020 BYP* 103

E	(m)	12.00	12.00	12.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	10.97	10.97	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	070 280 746 0	1.00	50	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	000 1423 159 0	1.00	50	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	277 253 085 0	1.00	50	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	000 477 335 0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	1096	1582	615	812	
CAPACITY	veh	2814	2396	1526	3175	
AVE DELAY	secs	2.1	4.4	4.0	1.5	
MAX DELAY	secs	2.5	5.9	5.2	1.7	
AVE QUEUE	veh	1	2	1	0	
MAX QUEUE	veh	1	2	1	0	

AVEDEL	s 3.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.6
COST	$ 54

12:1:09 COLLEGE AVE / EISENHOWER - 2020 BYP* 109

E (m)	12.00	12.00	12.00	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	10.97	10.97	10.97	10.97
RAD (m)	30.00	30.00	30.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	148 322 316 0	1.00	50	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	000 577 338 0	1.00	50	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	240 448 148 0	1.00	50	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	000 1788 323 0	1.00	50	0.75 0.859 0.75	15 45 75

FLOW	veh	786	915	836	2111
CAPACITY	veh	1588	2757	2514	2781
AVE DELAY	secs	4.4	1.9	2.1	5.3
MAX DELAY	secs	5.4	2.2	2.4	6.6
AVE QUEUE	veh	1	0	0	3
MAX QUEUE	veh	1	1	1	4

AVEDEL	s 3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.1
COST	$ 76

12:1:09 COLLEGE AVE / EISENHOWER - 2020 BYP* 105

E (m)	12.00	12.00	12.00	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	10.97	10.97	10.97	10.97
RAD (m)	30.00	30.00	30.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	070 280 746 0	1.00	85	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	000 1423 159 0	1.00	85	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	277 253 085 0	1.00	85	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	000 477 335 0	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	1096	1582	615	812
CAPACITY	veh	2609	2191	1321	2970
AVE DELAY	secs	2.3	6.0	5.2	1.6
MAX DELAY	secs	2.8	8.4	7.0	1.9
AVE QUEUE	veh	1	3	1	0
MAX QUEUE	veh	1	4	1	0

AVEDEL s	4.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.6
COST $	69

12:1:09 COLLEGE AVE / EISENHOWER - 2020 BYP* 110

E	(m)	12.00	12.00	12.00	12.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	10.97	10.97	10.97	10.97	RESULTS PERIOD	min 15 75
RAD	(m)	30.00	30.00	30.00	30.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	148 322 316 0	1.00	85	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	000 577 338 0	1.00	85	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	240 448 148 0	1.00	85	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	000 1788 323 0	1.00	85	0.75 0.859 0.75	15 45 75

FLOW	veh	786	915	836	2111	AVEDEL s	5.4
CAPACITY	veh	1383	2552	2309	2576	LOS SIG	A
AVE DELAY	secs	6.0	2.2	2.4	7.7	LOS UNSIG	A
MAX DELAY	secs	7.6	2.4	2.7	10.2		
AVE QUEUE	veh	1	1	1	5	VEHIC HRS	6.9
MAX QUEUE	veh	2	1	1	6	COST $	104

12:1:09 COLLEGE AVE / EISENHOWER - 2020 WB SEMI* 72

E	(m)	8.00	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	3.65	
RAD	(m)	30.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	AM	

LEG	NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB	ESNHWR	1.01	000 280 000 0	1.00	50	0.75 0.924 0.75	15 45 75
WB	COLLEG	1.01	113 0000 000 0	1.00	50	0.75 0.924 0.75	15 45 75
SB	ESNHWR	1.01	000 000 000 5	1.00	50	0.75 0.924 0.75	15 45 75
EB	COLLEG	1.01	000 000 335 0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	280	113	5	335
CAPACITY	veh	2199	998	1287	1285
AVE DELAY	secs	1.8	4.0	2.8	3.7
MAX DELAY	secs	2.1	4.6	3.1	4.3
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s	3.0
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		0.6
COST	$	9

12:1:09 COLLEGE AVE / EISENHOWER - 2020 WB SEMI* 73

E	(m)	8.00	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	3.65	
RAD	(m)	30.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 322 000 0	1.00	50	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	141 000 000 0	1.00	50	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	000 000 000 5	1.00	50	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	000 0000 323 0	1.00	50	0.75 0.859 0.75	15 45 75

FLOW	veh	322	141	5	323
CAPACITY	veh	2207	984	1287	1285
AVE DELAY	secs	1.9	4.2	2.8	3.7
MAX DELAY	secs	2.1	4.6	3.0	4.0
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.7
COST	$ 10

12:1:09 COLLEGE AVE / EISENHOWER - 2020 WB SEMI* 74

E	(m)	8.00	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	3.65	
RAD	(m)	30.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 280 000 0	1.00	85	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	113 0000 000 0	1.00	85	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	000 000 000 5	1.00	85	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	000 000 335 0	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	280	113	5	335
CAPACITY	veh	1994	793	1083	1080
AVE DELAY	secs	2.1	5.2	3.3	4.8
MAX DELAY	secs	2.4	6.0	3.7	5.5
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 3.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST	$ 12

12:1:09 COLLEGE AVE / EISENHOWER - 2020 WB SEMI* 75

E	(m)	8.00	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	3.65	
RAD	(m)	30.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	000 322 000 0	1.00	85	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	141 000 000 0	1.00	85	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	000 000 000 5	1.00	85	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	000 0000 323 0	1.00	85	0.75 0.859 0.75	15 45 75

FLOW	veh	322	141	5	323	
CAPACITY	veh	2002	779	1083	1080	
AVE DELAY	secs	2.1	5.6	3.3	4.7	
MAX DELAY	secs	2.3	6.2	3.6	5.1	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL s	3.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST $	12

15:1:09 COLLEGE AVE / KENSINGTON DR - 2035 2 LN* 125

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB KNSGTN	1.01	114 126 088 5	1.00	50	0.75 1.078 0.75	15 45 75
WB COLLEG	1.02	259 1047 141 5	1.00	50	0.75 1.078 0.75	15 45 75
SB KNSGTN	1.01	042 093 271 5	1.00	50	0.75 1.078 0.75	15 45 75
EB COLLEG	1.01	015 433 062 5	1.00	50	0.75 1.078 0.75	15 45 75

FLOW	veh	333	1452	411	515	AVEDEL	s 4.1
CAPACITY	veh	1435	2167	1430	2016	LOS SIG	A
AVE DELAY	secs	3.2	5.1	3.5	2.4	LOS UNSIG	A
MAX DELAY	secs	4.2	7.5	4.8	3.0		
AVE QUEUE	veh	0	2	0	0	VEHIC HRS	3.1
MAX QUEUE	veh	0	3	0	0	COST	$ 47

15:1:09 COLLEGE AVE / KENSINGTON DR - 2035 2 LN* 126

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB KNSGTN	1.01	210 184 062 0	1.00	50	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	440 680 195 0	1.00	50	0.75 0.924 0.75	15 45 75
SB KNSGTN	1.01	064 144 432 0	1.00	50	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	055 1098 130 0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	456	1315	640	1283	AVEDEL s	5.5
CAPACITY	veh	852	2125	1704	1829	LOS SIG	A
AVE DELAY	secs	9.1	4.4	3.3	6.6	LOS UNSIG	A
MAX DELAY	secs	12.4	5.4	4.0	8.7		
AVE QUEUE	veh	1	2	1	2	VEHIC HRS	5.7
MAX QUEUE	veh	1	2	1	3	COST $	85

15:1:09 COLLEGE AVE / KENSINGTON DR - 2035 2 LN* 127

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB KNSGTN	1.01	114 126 088 5	1.00	85	0.75 1.078 0.75	15 45 75
WB COLLEG	1.02	259 1047 141 5	1.00	85	0.75 1.078 0.75	15 45 75
SB KNSGTN	1.01	042 093 271 5	1.00	85	0.75 1.078 0.75	15 45 75
EB COLLEG	1.01	015 433 062 5	1.00	85	0.75 1.078 0.75	15 45 75

FLOW	veh	333	1452	411	515	AVEDEL	s 5.7
CAPACITY	veh	1230	1964	1225	1811	LOS SIG	A
AVE DELAY	secs	4.0	7.4	4.4	2.7	LOS UNSIG	A
MAX DELAY	secs	5.2	11.5	6.2	3.5		
AVE QUEUE	veh	0	3	1	0	VEHIC HRS	4.3
MAX QUEUE	veh	0	4	1	0	COST $	64

15:1:09 COLLEGE AVE / KENSINGTON DR - 2035 2 LN* 128

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB KNSGTN	1.01	210 184 062 0	1.00	85	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	440 680 195 0	1.00	85	0.75 0.924 0.75	15 45 75
SB KNSGTN	1.01	064 144 432 0	1.00	85	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	055 1098 130 0	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	456	1315	640	1283	AVEDEL s	9.1
CAPACITY	veh	648	1920	1499	1624	LOS SIG	A
AVE DELAY	secs	20.5	5.9	4.1	10.8	LOS UNSIG	A
MAX DELAY	secs	32.2	7.5	5.0	15.5		
AVE QUEUE	veh	3	2	1	4	VEHIC HRS	9.3
MAX QUEUE	veh	4	3	1	5	COST $	140

15:1:09 COLLEGE AVE / 441 SB RAMPS - 2035 BYP* 72

E	(m)	4.30	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	10.97	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB 441 S	1.01	000	000	000	0	1.00	50	0.75	0.996	0.75	15	45	75
WB COLLEG	1.01	000	1079	617	5	1.00	50	0.75	0.996	0.75	15	45	75
SB 441 S	1.01	000	000	551	0	1.00	50	0.75	0.996	0.75	15	45	75
EB COLLEG	1.01	252	576	000	5	1.00	50	0.75	0.996	0.75	15	45	75

FLOW	veh	0	1701	551	833	
CAPACITY	veh	730	2403	1236	2566	
AVE DELAY	secs	0.0	5.1	5.3	2.0	
MAX DELAY	secs	0.0	7.0	7.3	2.6	
AVE QUEUE	veh	0	2	1	0	
MAX QUEUE	veh	0	3	1	1	

AVEDEL s	4.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.7
COST $	56

15:1:09 COLLEGE AVE / 441 SB RAMPS - 2035 BYP* 73

E	(m)	4.30	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	10.97	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
WB COLLEG	1.02	000 872 437 5	1.00	50	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 1066 0	1.00	50	0.75 0.891 0.75	15 45 75
EB COLLEG	1.01	185 1603 000 5	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	0	1314	1066	1793	AVEDEL s	6.6
CAPACITY	veh	16	2380	1493	2261	LOS SIG	A
AVE DELAY	secs	0.0	3.3	8.4	7.9	LOS UNSIG	A
MAX DELAY	secs	0.0	3.9	11.2	11.3		
AVE QUEUE	veh	0	1	3	4	VEHIC HRS	7.7
MAX QUEUE	veh	0	1	3	5	COST $	115

15:1:09 COLLEGE AVE / 441 SB RAMPS - 2035 BYP* 74

E	(m)	4.30	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	10.97	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
WB COLLEG	1.01	000 1079 617 5	1.00	85	0.75 0.996 0.75	15 45 75
SB 441 S	1.01	000 000 551 0	1.00	85	0.75 0.996 0.75	15 45 75
EB COLLEG	1.01	252 576 000 5	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	0	1701	551	833	
CAPACITY	veh	525	2198	1032	2361	
AVE DELAY	secs	0.0	7.4	7.8	2.3	
MAX DELAY	secs	0.0	10.6	11.3	3.0	
AVE QUEUE	veh	0	4	1	1	
MAX QUEUE	veh	0	5	2	1	

AVEDEL s	6.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.2
COST $	78

15:1:09 COLLEGE AVE / 441 SB RAMPS - 2035 BYP* 75

E	(m)	4.30	8.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	10.97	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
WB COLLEG	1.02	000 872 437 5	1.00	85	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 1066 0	1.00	85	0.75 0.891 0.75	15 45 75
EB COLLEG	1.01	185 1603 000 5	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	0	1314	1066	1793	
CAPACITY	veh	4	2177	1288	2056	
AVE DELAY	secs	0.0	4.1	16.8	15.0	
MAX DELAY	secs	0.0	4.8	25.3	24.7	
AVE QUEUE	veh	0	2	5	8	
MAX QUEUE	veh	0	2	7	12	

AVEDEL	s 12.0
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	14.0
COST	$ 209

15:1:09 COLLEGE AVE / 441 SB RAMPS - 2035 SB SEMI* 55

E	(m)	4.30	8.00	4.30	12.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	10.97		
RAD	(m)	25.00	25.00	25.00	30.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	60.00	60.00	60.00	60.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
WB COLLEG	1.01	000 1079 000 0	1.00	50	0.75 0.996 0.75	15 45 75
SB 441 S	1.01	333 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
EB COLLEG	1.01	000 000 000 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	0	1079	333	5		
CAPACITY	veh	1285	2403	756	3622		
AVE DELAY	secs	0.0	2.7	8.5	1.0		
MAX DELAY	secs	0.0	3.3	11.3	1.1		
AVE QUEUE	veh	0	1	1	0		
MAX QUEUE	veh	0	1	1	0		

AVEDEL s	4.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.6
COST $	24

15:1:09 COLLEGE AVE / 441 SB RAMPS - 2035 SB SEMI* 56

E	(m)	4.30	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
WB COLLEG	1.02	000 872 000 0	1.00	50	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	464 000 00000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB COLLEG	1.01	000 0000 000 5	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	0	872	464	5	
CAPACITY	veh	1285	2380	853	3622	
AVE DELAY	secs	0.0	2.4	9.1	1.0	
MAX DELAY	secs	0.0	2.7	11.0	1.1	
AVE QUEUE	veh	0	1	1	0	
MAX QUEUE	veh	0	1	1	0	

AVEDEL	s 4.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.7
COST	$ 26

15:1:09 COLLEGE AVE / 441 SB RAMPS - 2035 SB SEMI* 57

E (m)	4.30	8.00	4.30	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	10.97
RAD (m)	25.00	25.00	25.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
WB COLLEG	1.01	000 1079 000 0	1.00	85	0.75 0.996 0.75	15 45 75
SB 441 S	1.01	333 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
EB COLLEG	1.01	000 000 000 5	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	0	1079	333	5
CAPACITY	veh	1080	2198	551	3417
AVE DELAY	secs	0.0	3.2	17.0	1.0
MAX DELAY	secs	0.0	4.0	25.1	1.2
AVE QUEUE	veh	0	1	2	0
MAX QUEUE	veh	0	1	2	0

AVEDEL s	6.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.5
COST $	38

15:1:09 COLLEGE AVE / 441 SB RAMPS - 2035 SB SEMI* 58

E	(m)	4.30	8.00	4.30	12.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	10.97		
RAD	(m)	25.00	25.00	25.00	30.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	60.00	60.00	60.00	60.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
WB COLLEG	1.02	000 872 000 0	1.00	85	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	464 000 00000 0	1.00	85	0.75 0.891 0.75	15 45 75
EB COLLEG	1.01	000 0000 000 5	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	0	872	464	5		
CAPACITY	veh	1080	2177	648	3417		
AVE DELAY	secs	0.0	2.7	19.0	1.0		
MAX DELAY	secs	0.0	3.1	25.3	1.1		
AVE QUEUE	veh	0	1	3	0		
MAX QUEUE	veh	0	1	3	0		

AVEDEL s	8.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.1
COST $	47

15:1:09 COLLEGE AVE / 441 NB RAMPS - 2035 BYP* 64

E	(m)	8.00	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	000	000	113	0	1.00	50	0.75 1.123 0.75	15 45 75
WB COLLEG	1.01	0000	1651	000	0	1.00	50	0.75 1.123 0.75	15 45 75
SB 441 N	1.01	000	000	000	0	1.00	50	0.75 1.123 0.75	15 45 75
EB COLLEG	1.01	000	851	349	0	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	113	1651	0	1200	AVEDEL	s 6.1
CAPACITY	veh	1583	2090	426	3622	LOS SIG	A
AVE DELAY	secs	2.4	9.8	0.0	1.5	LOS UNSIG	A
MAX DELAY	secs	3.2	17.0	0.0	1.9		
AVE QUEUE	veh	0	5	0	0	VEHIC HRS	5.0
MAX QUEUE	veh	0	7	0	1	COST $	76

15:1:09 COLLEGE AVE / 441 NB RAMPS - 2035 BYP* 65

E (m)	8.00	8.00	4.30	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	7.31	3.65	10.97
RAD (m)	25.00	25.00	30.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	000 000 303 0	1.00	50	0.75 1.036 0.75	15 45 75
WB COLLEG	1.01	000 907 000 0	1.00	50	0.75 1.036 0.75	15 45 75
SB 441 N	1.01	000 000 000 0	1.00	50	0.75 1.036 0.75	15 45 75
EB COLLEG	1.01	000 2090 306 0	1.00	50	0.75 1.036 0.75	15 45 75

FLOW	veh	303	907	0	2396	
CAPACITY	veh	763	1989	699	3622	
AVE DELAY	secs	8.7	3.3	0.0	2.9	
MAX DELAY	secs	13.7	4.3	0.0	4.1	
AVE QUEUE	veh	1	1	0	2	
MAX QUEUE	veh	1	1	0	2	

AVEDEL s	3.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.5
COST $	53

15:1:09 COLLEGE AVE / 441 NB RAMPS - 2035 BYP* 66

E	(m)	8.00	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	000	000	113	0	1.00	85	0.75 1.123 0.75	15 45 75
WB COLLEG	1.01	0000	1651	000	0	1.00	85	0.75 1.123 0.75	15 45 75
SB 441 N	1.01	000	000	000	0	1.00	85	0.75 1.123 0.75	15 45 75
EB COLLEG	1.01	000	851	349	0	1.00	85	0.75 1.123 0.75	15 45 75

FLOW	veh	113	1651	0	1200
CAPACITY	veh	1378	1885	221	3417
AVE DELAY	secs	2.8	24.8	0.0	1.6
MAX DELAY	secs	3.8	51.5	0.0	2.1
AVE QUEUE	veh	0	12	0	1
MAX QUEUE	veh	0	22	0	1

AVEDEL	s 14.5
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	12.0
COST	$ 180

15:1:09 COLLEGE AVE / 441 NB RAMPS - 2035 BYP* 67

E	(m)	8.00	8.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	10.97	
RAD	(m)	25.00	25.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB 441 N	1.01	000	000	303	0	1.00	85	0.75	1.036	0.75	15	45	75
WB COLLEG	1.01	000	907	000	0	1.00	85	0.75	1.036	0.75	15	45	75
SB 441 N	1.01	000	000	000	0	1.00	85	0.75	1.036	0.75	15	45	75
EB COLLEG	1.01	000	2090	306	0	1.00	85	0.75	1.036	0.75	15	45	75

FLOW	veh	303	907	0	2396	AVEDEL s	5.2
CAPACITY	veh	558	1784	494	3417	LOS SIG	A
AVE DELAY	secs	21.1	4.1	0.0	3.6	LOS UNSIG	A
MAX DELAY	secs	38.4	5.4	0.0	5.0		
AVE QUEUE	veh	2	1	0	2	VEHIC HRS	5.2
MAX QUEUE	veh	3	1	0	3	COST $	78

15:1:09 COLLEGE AVE / EISENHOWER - 2035 BYP* 135

E (m)	12.00	15.85	12.00	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	10.97	14.63	10.97	10.97
RAD (m)	30.00	30.00	30.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	65.00	65.00	65.00	65.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	079 394 847 5	1.00	50	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	117 1633 386 5	1.00	50	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	301 286 090 5	1.00	50	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	000 528 378 5	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	1325	2141	682	911	
CAPACITY	veh	2756	3067	1155	2957	
AVE DELAY	secs	2.5	4.0	8.3	1.7	
MAX DELAY	secs	3.0	5.4	12.6	2.0	
AVE QUEUE	veh	1	2	2	0	
MAX QUEUE	veh	1	3	2	0	

AVEDEL s	3.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.3
COST $	79

15:1:09 COLLEGE AVE / EISENHOWER - 2035 BYP* 136

E (m)	12.00	15.85	12.00	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	10.97	14.63	10.97	10.97
RAD (m)	30.00	30.00	30.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	65.00	65.00	65.00	65.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	167 439 356 5	1.00	50	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	168 650 364 5	1.00	50	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	270 627 149 5	1.00	50	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	0000 1824 364 5	1.00	50	0.75 0.859 0.75	15 45 75

FLOW	veh	967	1187	1051	2193
CAPACITY	veh	1608	3551	2436	2633
AVE DELAY	secs	5.6	1.5	2.6	8.2
MAX DELAY	secs	7.0	1.7	2.9	11.1
AVE QUEUE	veh	2	1	1	5
MAX QUEUE	veh	2	1	1	7

AVEDEL s	5.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.7
COST $	116

15:1:09 COLLEGE AVE / EISENHOWER - 2035 BYP* 137

E (m)	12.00	15.85	12.00	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	10.97	14.63	10.97	10.97
RAD (m)	30.00	30.00	30.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	65.00	65.00	65.00	65.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	079 394 847 5	1.00	85	0.75 0.924 0.75	15 45 75
WB COLLEG	1.01	117 1633 386 5	1.00	85	0.75 0.924 0.75	15 45 75
SB ESNHWR	1.01	301 286 090 5	1.00	85	0.75 0.924 0.75	15 45 75
EB COLLEG	1.01	000 528 378 5	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	1325	2141	682	911	
CAPACITY	veh	2551	2862	950	2752	
AVE DELAY	secs	2.9	5.2	18.5	1.9	
MAX DELAY	secs	3.6	7.5	32.6	2.3	
AVE QUEUE	veh	1	3	4	0	
MAX QUEUE	veh	1	4	6	1	

AVEDEL s	5.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	8.2
COST $	122

15:1:09 COLLEGE AVE / EISENHOWER - 2035 BYP* 138

E (m)	12.00	15.85	12.00	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	10.97	14.63	10.97	10.97
RAD (m)	30.00	30.00	30.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	65.00	65.00	65.00	65.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB ESNHWR	1.01	167 439 356 5	1.00	85	0.75 0.859 0.75	15 45 75
WB COLLEG	1.01	168 650 364 5	1.00	85	0.75 0.859 0.75	15 45 75
SB ESNHWR	1.01	270 627 149 5	1.00	85	0.75 0.859 0.75	15 45 75
EB COLLEG	1.01	0000 1824 364 5	1.00	85	0.75 0.859 0.75	15 45 75

FLOW	veh	967	1187	1051	2193
CAPACITY	veh	1405	3346	2231	2428
AVE DELAY	secs	8.2	1.6	3.0	15.7
MAX DELAY	secs	10.9	1.8	3.5	24.2
AVE QUEUE	veh	2	1	1	10
MAX QUEUE	veh	3	1	1	14

AVEDEL s	8.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	13.2
COST $	197

12:1:09 YEAR 2020 CTH U/W.FRONTAGE-1 LANE* 12

E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.04	009	070	043	5	1.00	50	0.75 2.001 0.75	15 45 75
WB-W.FRONT	1.01	003	006	005	5	1.00	50	0.75 2.001 0.75	15 45 75
SB-CTH U	1.01	002	124	000	5	1.00	50	0.75 2.001 0.75	15 45 75
EB-W.FRONT	1.01	028	006	002	5	1.00	50	0.75 2.001 0.75	15 45 75

FLOW	veh	127	19	131	41	AVEDEL	s 3.1
CAPACITY	veh	1226	1200	1236	1194	LOS SIG	A
AVE DELAY	secs	3.2	3.0	3.2	3.0	LOS UNSIG	A
MAX DELAY	secs	5.5	5.1	5.5	5.2		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.3
MAX QUEUE	veh	0	0	0	0	COST	$ 4

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E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.02	013	106	035	5	1.00	50	0.75 1.170 0.75	15 45 75
WB-W.FRONT	1.01	000	008	016	5	1.00	50	0.75 1.170 0.75	15 45 75
SB-CTH U	1.02	001	077	000	5	1.00	50	0.75 1.170 0.75	15 45 75
EB-W.FRONT	1.01	030	003	003	5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	159	29	83	41
CAPACITY	veh	1251	1185	1221	1214
AVE DELAY	secs	3.2	3.0	3.1	3.0
MAX DELAY	secs	4.2	3.9	4.0	3.9
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 3.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.3
COST	$ 4

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.04	009	070	043	5	1.00	85	0.75 2.001 0.75	15 45 75
WB-W.FRONT	1.01	003	006	005	5	1.00	85	0.75 2.001 0.75	15 45 75
SB-CTH U	1.01	002	124	000	5	1.00	85	0.75 2.001 0.75	15 45 75
EB-W.FRONT	1.01	028	006	002	5	1.00	85	0.75 2.001 0.75	15 45 75

FLOW	veh	127	19	131	41	AVEDEL	s 3.9
CAPACITY	veh	1027	995	1031	989	LOS SIG	A
AVE DELAY	secs	3.9	3.6	3.9	3.7	LOS UNSIG	A
MAX DELAY	secs	6.7	6.1	6.8	6.4		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.3
MAX QUEUE	veh	0	0	0	0	COST	$ 5

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.02	013	106	035	5	1.00	85	0.75 1.170 0.75	15 45 75
WB-W.FRONT	1.01	000	008	016	5	1.00	85	0.75 1.170 0.75	15 45 75
SB-CTH U	1.02	001	077	000	5	1.00	85	0.75 1.170 0.75	15 45 75
EB-W.FRONT	1.01	030	003	003	5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	159	29	83	41
CAPACITY	veh	1048	980	1018	1009
AVE DELAY	secs	4.0	3.7	3.8	3.6
MAX DELAY	secs	5.1	4.8	4.9	4.7
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 3.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.3
COST	$ 5

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.01	000	024	122	5	1.00	50	0.75 1.335 0.75	15 45 75
WB-SB41OFF	1.02	085	000	112	0	1.00	50	0.75 1.335 0.75	15 45 75
SB-CTH U	1.02	089	068	000	5	1.00	50	0.75 1.335 0.75	15 45 75
EB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	151	197	162	0	AVEDEL	s 3.5
CAPACITY	veh	1272	1176	1130	1168	LOS SIG	A
AVE DELAY	secs	3.1	3.6	3.6	0.0	LOS UNSIG	A
MAX DELAY	secs	4.4	5.1	5.2	0.0		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.5
MAX QUEUE	veh	0	0	0	0	COST	$ 7

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-CTH U	1.01	000	070	101	5	1.00	50	0.75	1.170	0.75	15	45	75
WB-SB41OFF	1.04	070	000	155	0	1.00	50	0.75	1.170	0.75	15	45	75
SB-CTH U	1.03	064	061	000	5	1.00	50	0.75	1.170	0.75	15	45	75
EB-SB41ON	1.01	000	000	000	0	1.00	50	0.75	1.170	0.75	15	45	75

FLOW	veh	176	225	130	0	AVEDEL	s 3.6
CAPACITY	veh	1272	1140	1105	1145	LOS SIG	A
AVE DELAY	secs	3.2	3.9	3.6	0.0	LOS UNSIG	A
MAX DELAY	secs	4.2	5.1	4.7	0.0		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.5
MAX QUEUE	veh	0	0	0	0	COST	$ 8

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E	(m)	4.30	4.30	4.30	4.30		TIME PERIOD	min	90		
L'	(m)	25.00	25.00	25.00	25.00		TIME SLICE	min	15		
V	(m)	3.65	3.65	3.65	3.65		RESULTS PERIOD	min	15	75	
RAD	(m)	20.00	20.00	20.00	20.00		TIME COST	$/hr	15.00		
PHI	(d)	30.00	30.00	30.00	30.00		FLOW PERIOD	min	15	75	
DIA	(m)	40.00	40.00	40.00	40.00		FLOW TYPE	pcu/veh	VEH		
GRAD SEP		0	0	0	0		FLOW PEAK	am/op/pm	AM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-CTH U	1.01	000	024	122	5	1.00	85	0.75	1.335	0.75	15	45	75
WB-SB41OFF	1.02	085	000	112	0	1.00	85	0.75	1.335	0.75	15	45	75
SB-CTH U	1.02	089	068	000	5	1.00	85	0.75	1.335	0.75	15	45	75
EB-SB41ON	1.01	000	000	000	0	1.00	85	0.75	1.335	0.75	15	45	75

FLOW	veh	151	197	162	0		AVEDEL	s 4.4
CAPACITY	veh	1067	973	927	963		LOS SIG	A
AVE DELAY	secs	3.8	4.5	4.6	0.0		LOS UNSIG	A
MAX DELAY	secs	5.3	6.5	6.6	0.0			
AVE QUEUE	veh	0	0	0	0		VEHIC HRS	0.6
MAX QUEUE	veh	0	0	0	0		COST	$ 9

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.01	000	070	101	5	1.00	85	0.75 1.170 0.75	15 45 75
WB-SB41OFF	1.04	070	000	155	0	1.00	85	0.75 1.170 0.75	15 45 75
SB-CTH U	1.03	064	061	000	5	1.00	85	0.75 1.170 0.75	15 45 75
EB-SB41ON	1.01	000	000	000	0	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	176	225	130	0	
CAPACITY	veh	1067	941	904	940	
AVE DELAY	secs	3.9	4.9	4.6	0.0	
MAX DELAY	secs	5.1	6.6	6.0	0.0	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL	s 4.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.7
COST	$ 10

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.02	312	125	000	5	1.00	50	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.05	000	000	000	0	1.00	50	0.75 1.170 0.75	15 45 75
SB-CTH U	1.01	000	134	031	5	1.00	50	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.05	063	000	023	0	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	442	0	170	86
CAPACITY	veh	1229	1140	1272	1132
AVE DELAY	secs	4.5	0.0	3.2	3.4
MAX DELAY	secs	6.1	0.0	4.1	4.4
AVE QUEUE	veh	1	0	0	0
MAX QUEUE	veh	1	0	0	0

AVEDEL	s 4.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST	$ 12

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.03	121 135 000 5	1.00	50	0.75 1.276 0.75	15 45 75
WB-NB41ON	1.04	000 000 000 0	1.00	50	0.75 1.276 0.75	15 45 75
SB-CTH U	1.01	000 181 031 5	1.00	50	0.75 1.276 0.75	15 45 75
EB-NB41OFF	1.01	076 000 065 0	1.00	50	0.75 1.276 0.75	15 45 75

FLOW	veh	261	0	217	141	AVEDEL s	3.5
CAPACITY	veh	1195	1123	1272	1151	LOS SIG	A
AVE DELAY	secs	3.8	0.0	3.3	3.5	LOS UNSIG	A
MAX DELAY	secs	5.2	0.0	4.6	4.8		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.6
MAX QUEUE	veh	0	0	0	0	COST $	9

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.02	312 125 000 5	1.00	85	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.05	000 000 000 0	1.00	85	0.75 1.170 0.75	15 45 75
SB-CTH U	1.01	000 134 031 5	1.00	85	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.05	063 000 023 0	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	442	0	170	86	AVEDEL s	5.3
CAPACITY	veh	1026	943	1067	935	LOS SIG	A
AVE DELAY	secs	6.1	0.0	3.9	4.1	LOS UNSIG	A
MAX DELAY	secs	8.4	0.0	5.1	5.4		
AVE QUEUE	veh	1	0	0	0	VEHIC HRS	1.0
MAX QUEUE	veh	1	0	0	0	COST $	15

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.03	121 135 000 5	1.00	85	0.75 1.276 0.75	15 45 75
WB-NB41ON	1.04	000 000 000 0	1.00	85	0.75 1.276 0.75	15 45 75
SB-CTH U	1.01	000 181 031 5	1.00	85	0.75 1.276 0.75	15 45 75
EB-NB41OFF	1.01	076 000 065 0	1.00	85	0.75 1.276 0.75	15 45 75

FLOW	veh	261	0	217	141	AVEDEL s	4.5
CAPACITY	veh	994	924	1067	946	LOS SIG	A
AVE DELAY	secs	4.8	0.0	4.1	4.4	LOS UNSIG	A
MAX DELAY	secs	6.8	0.0	5.7	6.1		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.8
MAX QUEUE	veh	0	0	0	0	COST $	12

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.00	3.00	3.00	3.00	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.11	047	359	003	5	1.00	50	0.75 1.892 0.75	15 45 75
WB-E.FRONT	1.16	023	000	024	5	1.00	50	0.75 1.892 0.75	15 45 75
SB-CTH U	1.01	000	155	035	5	1.00	50	0.75 1.892 0.75	15 45 75
EB-E.FRONT	1.05	043	000	037	5	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	414	52	195	85	AVEDEL	s 4.7
CAPACITY	veh	1078	858	1208	1063	LOS SIG	A
AVE DELAY	secs	5.5	4.4	3.5	3.6	LOS UNSIG	A
MAX DELAY	secs	10.1	7.6	5.9	6.1		
AVE QUEUE	veh	1	0	0	0	VEHIC HRS	1.0
MAX QUEUE	veh	1	0	0	0	COST	$ 15

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.00	3.00	3.00	3.00	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.13	008 215 000 5	1.00	50	0.75 1.222 0.75	15 45 75
WB-E.FRONT	1.11	041 004 002 5	1.00	50	0.75 1.222 0.75	15 45 75
SB-CTH U	1.01	013 246 009 5	1.00	50	0.75 1.222 0.75	15 45 75
EB-E.FRONT	1.03	010 000 012 5	1.00	50	0.75 1.222 0.75	15 45 75

FLOW	veh	228	52	273	27	AVEDEL	s 3.9
CAPACITY	veh	1085	988	1222	1063	LOS SIG	A
AVE DELAY	secs	4.1	3.8	3.7	3.4	LOS UNSIG	A
MAX DELAY	secs	5.5	5.0	5.0	4.5		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.6
MAX QUEUE	veh	0	0	0	0	COST	$ 9

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E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.00	3.00	3.00	3.00
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-CTH U	1.11	047	359	003	5	1.00	85	0.75	1.892	0.75	15	45	75
WB-E.FRONT	1.16	023	000	024	5	1.00	85	0.75	1.892	0.75	15	45	75
SB-CTH U	1.01	000	155	035	5	1.00	85	0.75	1.892	0.75	15	45	75
EB-E.FRONT	1.05	043	000	037	5	1.00	85	0.75	1.892	0.75	15	45	75

FLOW	veh	414	52	195	85
CAPACITY	veh	892	679	1003	866
AVE DELAY	secs	7.9	5.7	4.4	4.5
MAX DELAY	secs	15.0	10.0	7.5	7.7
AVE QUEUE	veh	1	0	0	0
MAX QUEUE	veh	1	0	0	0

AVEDEL s	6.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	20

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E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.00	3.00	3.00	3.00
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.13	008 215 000 5	1.00	85	0.75 1.222 0.75	15 45 75
WB-E.FRONT	1.11	041 004 002 5	1.00	85	0.75 1.222 0.75	15 45 75
SB-CTH U	1.01	013 246 009 5	1.00	85	0.75 1.222 0.75	15 45 75
EB-E.FRONT	1.03	010 000 012 5	1.00	85	0.75 1.222 0.75	15 45 75

FLOW	veh	228	52	273	27	
CAPACITY	veh	902	802	1017	862	
AVE DELAY	secs	5.2	4.7	4.7	4.2	
MAX DELAY	secs	7.1	6.3	6.4	5.6	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL s	4.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST $	12

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.04	010	079	116	5	1.00	50	0.75 2.001 0.75	15 45 75
WB-W.FRONT	1.01	004	009	005	5	1.00	50	0.75 2.001 0.75	15 45 75
SB-CTH U	1.01	005	140	000	5	1.00	50	0.75 2.001 0.75	15 45 75
EB-W.FRONT	1.01	032	014	006	5	1.00	50	0.75 2.001 0.75	15 45 75

FLOW	veh	210	23	150	57	AVEDEL	s 3.4
CAPACITY	veh	1219	1151	1192	1185	LOS SIG	A
AVE DELAY	secs	3.5	3.1	3.4	3.1	LOS UNSIG	A
MAX DELAY	secs	6.1	5.4	5.9	5.4		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.4
MAX QUEUE	veh	0	0	0	0	COST	$ 6

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.02	015 119 046 5	1.00	50	0.75 1.170 0.75	15 45 75
WB-W.FRONT	1.01	000 013 044 5	1.00	50	0.75 1.170 0.75	15 45 75
SB-CTH U	1.02	000 137 000 5	1.00	50	0.75 1.170 0.75	15 45 75
EB-W.FRONT	1.01	082 007 006 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	185	62	142	100	AVEDEL	s 3.3
CAPACITY	veh	1247	1170	1197	1165	LOS SIG	A
AVE DELAY	secs	3.3	3.2	3.3	3.3	LOS UNSIG	A
MAX DELAY	secs	4.3	4.1	4.3	4.3		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.4
MAX QUEUE	veh	0	0	0	0	COST	$ 7

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-CTH U	1.04	010	079	116	5	1.00	85	0.75	2.001	0.75	15	45	75
WB-W.FRONT	1.01	004	009	005	5	1.00	85	0.75	2.001	0.75	15	45	75
SB-CTH U	1.01	005	140	000	5	1.00	85	0.75	2.001	0.75	15	45	75
EB-W.FRONT	1.01	032	014	006	5	1.00	85	0.75	2.001	0.75	15	45	75

FLOW	veh	210	23	150	57	AVEDEL	s 4.2
CAPACITY	veh	1020	946	987	980	LOS SIG	A
AVE DELAY	secs	4.4	3.8	4.2	3.8	LOS UNSIG	A
MAX DELAY	secs	7.7	6.6	7.5	6.6		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.5
MAX QUEUE	veh	0	0	0	0	COST	$ 8

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.02	015	119	046	5	1.00	85	0.75 1.170 0.75	15 45 75
WB-W.FRONT	1.01	000	013	044	5	1.00	85	0.75 1.170 0.75	15 45 75
SB-CTH U	1.02	000	137	000	5	1.00	85	0.75 1.170 0.75	15 45 75
EB-W.FRONT	1.01	082	007	006	5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	185	62	142	100	AVEDEL	s 4.1
CAPACITY	veh	1044	965	994	960	LOS SIG	A
AVE DELAY	secs	4.1	3.9	4.1	4.1	LOS UNSIG	A
MAX DELAY	secs	5.3	5.1	5.4	5.4		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.6
MAX QUEUE	veh	0	0	0	0	COST	$ 8

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.01	000	050	124	5	1.00	50	0.75 1.335 0.75	15 45 75
WB-SB41OFF	1.02	132	000	126	0	1.00	50	0.75 1.335 0.75	15 45 75
SB-CTH U	1.02	093	075	000	5	1.00	50	0.75 1.335 0.75	15 45 75
EB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	179	258	173	0	AVEDEL	s 3.6
CAPACITY	veh	1272	1161	1121	1156	LOS SIG	A
AVE DELAY	secs	3.2	3.9	3.7	0.0	LOS UNSIG	A
MAX DELAY	secs	4.5	5.6	5.3	0.0		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.6
MAX QUEUE	veh	0	0	0	0	COST	$ 9

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.01	000	106	154	5	1.00	50	0.75 1.170 0.75	15 45 75
WB-SB41OFF	1.04	079	000	175	0	1.00	50	0.75 1.170 0.75	15 45 75
SB-CTH U	1.03	120	144	000	5	1.00	50	0.75 1.170 0.75	15 45 75
EB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	265	254	269	0	AVEDEL	s 4.1
CAPACITY	veh	1272	1091	1064	1086	LOS SIG	A
AVE DELAY	secs	3.5	4.2	4.4	0.0	LOS UNSIG	A
MAX DELAY	secs	4.6	5.6	6.0	0.0		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.9
MAX QUEUE	veh	0	0	0	0	COST	$ 13

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E	(m)	4.30	4.30	4.30	4.30		TIME PERIOD	min	90		
L'	(m)	25.00	25.00	25.00	25.00		TIME SLICE	min	15		
V	(m)	3.65	3.65	3.65	3.65		RESULTS PERIOD	min	15	75	
RAD	(m)	20.00	20.00	20.00	20.00		TIME COST	$/hr	15.00		
PHI	(d)	30.00	30.00	30.00	30.00		FLOW PERIOD	min	15	75	
DIA	(m)	40.00	40.00	40.00	40.00		FLOW TYPE	pcu/veh	VEH		
GRAD SEP		0	0	0	0		FLOW PEAK	am/op/pm	AM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-CTH U	1.01	000	050	124	5	1.00	85	0.75	1.335	0.75	15	45	75
WB-SB41OFF	1.02	132	000	126	0	1.00	85	0.75	1.335	0.75	15	45	75
SB-CTH U	1.02	093	075	000	5	1.00	85	0.75	1.335	0.75	15	45	75
EB-SB41ON	1.01	000	000	000	0	1.00	85	0.75	1.335	0.75	15	45	75

FLOW	veh	179	258	173	0		AVEDEL	s 4.6
CAPACITY	veh	1067	958	918	951		LOS SIG	A
AVE DELAY	secs	4.0	5.1	4.7	0.0		LOS UNSIG	A
MAX DELAY	secs	5.5	7.4	6.8	0.0			
AVE QUEUE	veh	0	0	0	0		VEHIC HRS	0.8
MAX QUEUE	veh	0	0	0	0		COST	$ 12

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.01	000	106	154	5	1.00	85	0.75 1.170 0.75	15 45 75
WB-SB41OFF	1.04	079	000	175	0	1.00	85	0.75 1.170 0.75	15 45 75
SB-CTH U	1.03	120	144	000	5	1.00	85	0.75 1.170 0.75	15 45 75
EB-SB41ON	1.01	000	000	000	0	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	265	254	269	0
CAPACITY	veh	1067	892	863	881
AVE DELAY	secs	4.4	5.5	6.0	0.0
MAX DELAY	secs	5.8	7.5	8.2	0.0
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	1	0

AVEDEL	s 5.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.2
COST	$ 17

14:1:09 YEAR 2035 CTH U/NB 41 RAMP-1 LANE* 12

E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.02	344 137 000 5	1.00	50	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.05	000 000 000 0	1.00	50	0.75 1.170 0.75	15 45 75
SB-CTH U	1.01	000 151 035 5	1.00	50	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.05	183 000 036 0	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	486	0	191	219	AVEDEL s	4.3
CAPACITY	veh	1220	1126	1272	1121	LOS SIG	A
AVE DELAY	secs	4.8	0.0	3.3	3.9	LOS UNSIG	A
MAX DELAY	secs	6.6	0.0	4.2	5.2		
AVE QUEUE	veh	1	0	0	0	VEHIC HRS	1.1
MAX QUEUE	veh	1	0	0	0	COST $	16

14:1:09 YEAR 2035 CTH U/NB 41 RAMP-1 LANE* 13

E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.03	136 200 000 5	1.00	50	0.75 1.276 0.75	15 45 75
WB-NB41ON	1.04	000 000 000 0	1.00	50	0.75 1.276 0.75	15 45 75
SB-CTH U	1.01	000 204 076 5	1.00	50	0.75 1.276 0.75	15 45 75
EB-NB41OFF	1.01	085 000 073 0	1.00	50	0.75 1.276 0.75	15 45 75

FLOW	veh	341	0	285	158	AVEDEL s	3.9
CAPACITY	veh	1166	1082	1272	1113	LOS SIG	A
AVE DELAY	secs	4.3	0.0	3.6	3.7	LOS UNSIG	A
MAX DELAY	secs	6.1	0.0	4.9	5.1		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.8
MAX QUEUE	veh	1	0	0	0	COST $	13

14:1:09 YEAR 2035 CTH U/NB 41 RAMP-1 LANE* 14

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.02	344 137 000 5	1.00	85	0.75 1.170 0.75	15 45 75
WB-NB41ON	1.05	000 000 000 0	1.00	85	0.75 1.170 0.75	15 45 75
SB-CTH U	1.01	000 151 035 5	1.00	85	0.75 1.170 0.75	15 45 75
EB-NB41OFF	1.05	183 000 036 0	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	486	0	191	219	
CAPACITY	veh	1017	929	1067	924	
AVE DELAY	secs	6.7	0.0	4.0	5.0	
MAX DELAY	secs	9.4	0.0	5.2	6.7	
AVE QUEUE	veh	1	0	0	0	
MAX QUEUE	veh	1	0	0	0	

AVEDEL	s 5.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST	$ 21

14:1:09 YEAR 2035 CTH U/NB 41 RAMP-1 LANE* 15

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.03	136	200	000	5	1.00	85	0.75 1.276 0.75	15 45 75
WB-NB41ON	1.04	000	000	000	0	1.00	85	0.75 1.276 0.75	15 45 75
SB-CTH U	1.01	000	204	076	5	1.00	85	0.75 1.276 0.75	15 45 75
EB-NB41OFF	1.01	085	000	073	0	1.00	85	0.75 1.276 0.75	15 45 75

FLOW	veh	341	0	285	158	
CAPACITY	veh	965	883	1067	908	
AVE DELAY	secs	5.7	0.0	4.5	4.7	
MAX DELAY	secs	8.2	0.0	6.3	6.6	
AVE QUEUE	veh	1	0	0	0	
MAX QUEUE	veh	1	0	0	0	

AVEDEL	s 5.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST	$ 16

14:1:09 YEAR 2035 CTH U/E.FRONTAGE-1 LANE* 15

E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.00	3.00	3.00	3.00	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.11	053 397 004 5	1.00	50	0.75 1.892 0.75	15 45 75
WB-E.FRONT	1.16	085 000 025 5	1.00	50	0.75 1.892 0.75	15 45 75
SB-CTH U	1.01	000 172 045 5	1.00	50	0.75 1.892 0.75	15 45 75
EB-E.FRONT	1.05	049 000 042 5	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	459	115	222	96	AVEDEL s	5.1
CAPACITY	veh	1071	835	1207	1048	LOS SIG	A
AVE DELAY	secs	6.1	5.0	3.6	3.7	LOS UNSIG	A
MAX DELAY	secs	11.4	8.9	6.1	6.3		
AVE QUEUE	veh	1	0	0	0	VEHIC HRS	1.3
MAX QUEUE	veh	1	0	0	0	COST $	19

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.00	3.00	3.00	3.00	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.13	043 242 000 5	1.00	50	0.75 1.222 0.75	15 45 75
WB-E.FRONT	1.11	098 000 014 5	1.00	50	0.75 1.222 0.75	15 45 75
SB-CTH U	1.01	000 277 018 5	1.00	50	0.75 1.222 0.75	15 45 75
EB-E.FRONT	1.03	012 000 013 5	1.00	50	0.75 1.222 0.75	15 45 75

FLOW	veh	290	117	300	30	AVEDEL s	4.1
CAPACITY	veh	1080	973	1217	1034	LOS SIG	A
AVE DELAY	secs	4.5	4.1	3.8	3.5	LOS UNSIG	A
MAX DELAY	secs	6.1	5.6	5.2	4.7		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.8
MAX QUEUE	veh	0	0	0	0	COST $	13

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14:1:09            YEAR 2035 CTH U/E.FRONTAGE-1 LANE*                  17
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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	3.00	3.00	3.00	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.11	053	397	004	5	1.00	85	0.75 1.892 0.75	15 45 75
WB-E.FRONT	1.16	085	000	025	5	1.00	85	0.75 1.892 0.75	15 45 75
SB-CTH U	1.01	000	172	045	5	1.00	85	0.75 1.892 0.75	15 45 75
EB-E.FRONT	1.05	049	000	042	5	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	459	115	222	96
CAPACITY	veh	884	656	1002	851
AVE DELAY	secs	9.2	6.7	4.5	4.7
MAX DELAY	secs	18.0	12.2	7.8	8.1
AVE QUEUE	veh	1	0	0	0
MAX QUEUE	veh	2	0	0	0

AVEDEL	s 7.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST	$ 27

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E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.00	3.00	3.00	3.00
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-CTH U	1.13	043	242	000	5	1.00	85	0.75 1.222 0.75	15 45 75
WB-E.FRONT	1.11	098	000	014	5	1.00	85	0.75 1.222 0.75	15 45 75
SB-CTH U	1.01	000	277	018	5	1.00	85	0.75 1.222 0.75	15 45 75
EB-E.FRONT	1.03	012	000	013	5	1.00	85	0.75 1.222 0.75	15 45 75

FLOW	veh	290	117	300	30
CAPACITY	veh	897	786	1012	833
AVE DELAY	secs	5.8	5.3	4.9	4.4
MAX DELAY	secs	8.0	7.2	6.8	5.9
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	1	0	0	0

AVEDEL	s 5.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST	$ 16

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E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-FREEDOM	1.02	102	245	075	5	1.00	50	0.75	0.830	0.75	15	45	75
WB-EVRGRN	1.01	185	107	077	5	1.00	50	0.75	0.830	0.75	15	45	75
SB-FREEDOM	1.01	019	245	064	5	1.00	50	0.75	0.830	0.75	15	45	75
EB-EVRGRN	1.02	057	360	007	5	1.00	50	0.75	0.830	0.75	15	45	75

FLOW	veh	427	374	333	429
CAPACITY	veh	1013	1082	1121	1040
AVE DELAY	secs	6.0	5.0	4.5	5.8
MAX DELAY	secs	6.6	5.4	4.9	6.3
AVE QUEUE	veh	1	1	0	1
MAX QUEUE	veh	1	1	0	1

AVEDEL s	5.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.3
COST $	35

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	130 249 039 5	1.00	50	0.75 0.959 0.75	15 45 75
WB-EVRGRN	1.01	078 060 137 5	1.00	50	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.02	009 391 129 5	1.00	50	0.75 0.959 0.75	15 45 75
EB-EVRGRN	1.01	102 112 028 5	1.00	50	0.75 0.959 0.75	15 45 75

FLOW	veh	423	280	534	247	AVEDEL	s 5.3
CAPACITY	veh	1115	1090	1123	896	LOS SIG	A
AVE DELAY	secs	5.1	4.4	6.0	5.4	LOS UNSIG	A
MAX DELAY	secs	6.2	5.2	7.4	6.6		
AVE QUEUE	veh	1	0	1	0	VEHIC HRS	2.2
MAX QUEUE	veh	1	0	1	0	COST	$ 33

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD min	90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE min	15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD min	15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST $/hr	15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD min	15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE pcu/veh	VEH
GRAD SEP		0	0	0	0	FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.02	102 245 075 5	1.00	85	0.75 0.830 0.75	15 45 75
WB-EVRGRN	1.01	185 107 077 5	1.00	85	0.75 0.830 0.75	15 45 75
SB-FREEDOM	1.01	019 245 064 5	1.00	85	0.75 0.830 0.75	15 45 75
EB-EVRGRN	1.02	057 360 007 5	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	427	374	333	429	AVEDEL s	7.9
CAPACITY	veh	810	877	916	837	LOS SIG	A
AVE DELAY	secs	9.2	7.0	6.1	8.6	LOS UNSIG	A
MAX DELAY	secs	10.2	7.7	6.6	9.6		
AVE QUEUE	veh	1	1	1	1	VEHIC HRS	3.4
MAX QUEUE	veh	1	1	1	1	COST $	51

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	130 249 039 5	1.00	85	0.75 0.959 0.75	15 45 75
WB-EVRGRN	1.01	078 060 137 5	1.00	85	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.02	009 391 129 5	1.00	85	0.75 0.959 0.75	15 45 75
EB-EVRGRN	1.01	102 112 028 5	1.00	85	0.75 0.959 0.75	15 45 75

FLOW	veh	423	280	534	247	AVEDEL	s 7.8
CAPACITY	veh	910	885	921	691	LOS SIG	A
AVE DELAY	secs	7.2	5.8	9.1	8.0	LOS UNSIG	A
MAX DELAY	secs	8.9	7.0	11.6	9.9		
AVE QUEUE	veh	1	0	1	1	VEHIC HRS	3.2
MAX QUEUE	veh	1	1	2	1	COST	$ 48

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	3.65	3.65
RAD (m)	25.00	20.00	25.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	000	275	223	5	1.00	50	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	170	000	142	5	1.00	50	0.75 1.123 0.75	15 45 75
SB-FREEDOM	1.03	82	266	000	5	1.00	50	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	503	317	353	0
CAPACITY	veh	2399	1005	1671	1048
AVE DELAY	secs	1.9	5.1	2.7	0.0
MAX DELAY	secs	2.4	6.9	3.5	0.0
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	1	0	0

AVEDEL	s 3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.0
COST	$ 15

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	3.65	3.65
RAD (m)	25.00	20.00	25.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-FREEDOM	1.01	000	343	159	5	1.00	50	0.75	1.398	0.75	15	45	75
WB-SB41OFF	1.01	132	000	115	5	1.00	50	0.75	1.398	0.75	15	45	75
SB-FREEDOM	1.01	191	479	000	5	1.00	50	0.75	1.398	0.75	15	45	75
EB-SB41ON	1.01	000	000	000	0	1.00	50	0.75	1.398	0.75	15	45	75

FLOW	veh	507	252	675	0
CAPACITY	veh	2399	1003	1764	952
AVE DELAY	secs	1.9	4.8	3.3	0.0
MAX DELAY	secs	2.7	7.3	5.1	0.0
AVE QUEUE	veh	0	0	1	0
MAX QUEUE	veh	0	0	1	0

AVEDEL	s 3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.2
COST	$ 18

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	3.65	3.65
RAD (m)	25.00	20.00	25.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-FREEDOM	1.01	000	275	223	5	1.00	85	0.75	1.123	0.75	15	45	75
WB-SB41OFF	1.01	170	000	142	5	1.00	85	0.75	1.123	0.75	15	45	75
SB-FREEDOM	1.03	82	266	000	5	1.00	85	0.75	1.123	0.75	15	45	75
EB-SB41ON	1.01	000	000	000	0	1.00	85	0.75	1.123	0.75	15	45	75

FLOW	veh	503	317	353	0
CAPACITY	veh	2194	801	1470	843
AVE DELAY	secs	2.1	7.4	3.2	0.0
MAX DELAY	secs	2.7	10.2	4.2	0.0
AVE QUEUE	veh	0	1	0	0
MAX QUEUE	veh	0	1	0	0

AVEDEL s	3.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	19

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	3.65	3.65
RAD (m)	25.00	20.00	25.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	000	343	159	5	1.00	85	0.75 1.398 0.75	15 45 75
WB-SB41OFF	1.01	132	000	115	5	1.00	85	0.75 1.398 0.75	15 45 75
SB-FREEDOM	1.01	191	479	000	5	1.00	85	0.75 1.398 0.75	15 45 75
EB-SB41ON	1.01	000	000	000	0	1.00	85	0.75 1.398 0.75	15 45 75

FLOW	veh	507	252	675	0
CAPACITY	veh	2194	798	1559	747
AVE DELAY	secs	2.1	6.6	4.1	0.0
MAX DELAY	secs	3.0	10.4	6.5	0.0
AVE QUEUE	veh	0	0	1	0
MAX QUEUE	veh	0	1	1	0

AVEDEL	s 3.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.5
COST	$ 23

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	3.65
RAD (m)	25.00	20.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.04	300 348 000 5	1.00	50	0.75 0.996 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
SB-FREEDOM	1.04	000 460 103 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-NB41OFF	1.04	000 000 144 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	653	0	568	149
CAPACITY	veh	2144	998	2330	943
AVE DELAY	secs	2.4	0.0	2.0	4.5
MAX DELAY	secs	2.9	0.0	2.4	5.4
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 2.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.9
COST	$ 14

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	3.65
RAD (m)	25.00	20.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.05	356 223 000 5	1.00	50	0.75 0.959 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.03	000 467 082 5	1.00	50	0.75 0.959 0.75	15 45 75
EB-NB41OFF	1.03	000 000 292 0	1.00	50	0.75 0.959 0.75	15 45 75

FLOW	veh	584	0	554	292
CAPACITY	veh	2036	989	2356	963
AVE DELAY	secs	2.4	0.0	2.0	5.3
MAX DELAY	secs	2.9	0.0	2.3	6.4
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 2.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST	$ 17

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	3.65
RAD (m)	25.00	20.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.04	300 348 000 5	1.00	85	0.75 0.996 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
SB-FREEDOM	1.04	000 460 103 5	1.00	85	0.75 0.996 0.75	15 45 75
EB-NB41OFF	1.04	000 000 144 5	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	653	0	568	149
CAPACITY	veh	1945	793	2131	744
AVE DELAY	secs	2.7	0.0	2.3	5.9
MAX DELAY	secs	3.4	0.0	2.7	7.3
AVE QUEUE	veh	1	0	0	0
MAX QUEUE	veh	1	0	0	0

AVEDEL	s 2.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST	$ 16

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	3.65
RAD (m)	25.00	20.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.05	356	223	000	5	1.00	85	0.75 0.959 0.75	15 45 75
WB-NB41ON	1.01	000	000	000	0	1.00	85	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.03	000	467	082	5	1.00	85	0.75 0.959 0.75	15 45 75
EB-NB41OFF	1.03	000	000	292	0	1.00	85	0.75 0.959 0.75	15 45 75

FLOW	veh	584	0	554	292
CAPACITY	veh	1839	784	2155	762
AVE DELAY	secs	2.8	0.0	2.2	7.5
MAX DELAY	secs	3.4	0.0	2.6	9.3
AVE QUEUE	veh	0	0	0	1
MAX QUEUE	veh	1	0	0	1

AVEDEL	s 3.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST	$ 21

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.04	000 000 000 5	1.00	50	0.75 0.996 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
SB-FREEDOM	1.04	000 460 000 0	1.00	50	0.75 0.996 0.75	15 45 75
EB-NB41OFF	1.04	309 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	5	0	460	309	
CAPACITY	veh	1238	1272	1236	1001	
AVE DELAY	secs	2.9	0.0	4.6	5.1	
MAX DELAY	secs	3.4	0.0	5.6	6.3	
AVE QUEUE	veh	0	0	1	0	
MAX QUEUE	veh	0	0	1	1	

AVEDEL	s 4.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.0
COST	$ 15

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-FREEDOM	1.05	000	000	000	5	1.00	50	0.75	0.959	0.75	15	45	75
WB-NB41ON	1.01	000	000	000	0	1.00	50	0.75	0.959	0.75	15	45	75
SB-FREEDOM	1.03	000	467	000	0	1.00	50	0.75	0.959	0.75	15	45	75
EB-NB41OFF	1.03	444	000	000	0	1.00	50	0.75	0.959	0.75	15	45	75

FLOW	veh	5	0	467	444
CAPACITY	veh	1226	1272	1248	1010
AVE DELAY	secs	2.9	0.0	4.5	6.2
MAX DELAY	secs	3.3	0.0	5.4	7.7
AVE QUEUE	veh	0	0	1	1
MAX QUEUE	veh	0	0	1	1

AVEDEL	s 5.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST	$ 20

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E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.04	000 000 000 5	1.00	85	0.75 0.996 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
SB-FREEDOM	1.04	000 460 000 0	1.00	85	0.75 0.996 0.75	15 45 75
EB-NB41OFF	1.04	309 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	5	0	460	309	AVEDEL	s 6.5
CAPACITY	veh	1039	1067	1037	802	LOS SIG	A
AVE DELAY	secs	3.4	0.0	6.1	7.2	LOS UNSIG	A
MAX DELAY	secs	4.0	0.0	7.6	9.1		
AVE QUEUE	veh	0	0	1	1	VEHIC HRS	1.4
MAX QUEUE	veh	0	0	1	1	COST	$ 21

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.05	000	000	000	5	1.00	85	0.75 0.959 0.75	15 45 75
WB-NB41ON	1.01	000	000	000	0	1.00	85	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.03	000	467	000	0	1.00	85	0.75 0.959 0.75	15 45 75
EB-NB41OFF	1.03	444	000	000	0	1.00	85	0.75 0.959 0.75	15 45 75

FLOW	veh	5	0	467	444
CAPACITY	veh	1029	1067	1047	809
AVE DELAY	secs	3.5	0.0	6.1	9.7
MAX DELAY	secs	4.0	0.0	7.3	12.4
AVE QUEUE	veh	0	0	1	1
MAX QUEUE	veh	0	0	1	1

AVEDEL	s 7.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST	$ 30

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	3.65
RAD (m)	25.00	20.00	25.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	052 357 058 5	1.00	50	0.75 0.924 0.75	15 45 75
WB-MOASIS	1.04	186 009 036 5	1.00	50	0.75 0.924 0.75	15 45 75
SB-FREEDOM	1.13	025 357 153 5	1.00	50	0.75 0.924 0.75	15 45 75
EB-MOASIS	1.07	008 005 059 5	1.00	50	0.75 0.924 0.75	15 45 75

FLOW veh	472	236	540	77
CAPACITY veh	2215	984	2071	891
AVE DELAY secs	2.0	4.7	2.3	4.4
MAX DELAY secs	2.3	5.5	2.7	5.0
AVE QUEUE veh	0	0	0	0
MAX QUEUE veh	0	0	0	0

AVEDEL s	2.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.0
COST $	15

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E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	25.00	20.00	25.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.02	045	291	006	5	1.00	50	0.75 2.119 0.75	15 45 75
WB-MOASIS	1.04	118	002	030	5	1.00	50	0.75 2.119 0.75	15 45 75
SB-FREEDOM	1.12	103	628	074	5	1.00	50	0.75 2.119 0.75	15 45 75
EB-MOASIS	1.03	041	001	058	5	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	347	155	810	105
CAPACITY	veh	2266	1045	2133	821
AVE DELAY	secs	1.8	4.0	2.8	5.3
MAX DELAY	secs	3.3	7.5	5.4	10.3
AVE QUEUE	veh	0	0	1	0
MAX QUEUE	veh	0	0	1	0

AVEDEL	s 2.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST	$ 17

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	3.65
RAD (m)	25.00	20.00	25.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	052 357 058 5	1.00	85	0.75 0.924 0.75	15 45 75
WB-MOASIS	1.04	186 009 036 5	1.00	85	0.75 0.924 0.75	15 45 75
SB-FREEDOM	1.13	025 357 153 5	1.00	85	0.75 0.924 0.75	15 45 75
EB-MOASIS	1.07	008 005 059 5	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	472	236	540	77
CAPACITY	veh	2010	785	1888	698
AVE DELAY	secs	2.3	6.4	2.6	5.7
MAX DELAY	secs	2.7	7.6	3.0	6.6
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL s	3.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.2
COST $	19

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	3.65
RAD (m)	25.00	20.00	25.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.02	045 291 006 5	1.00	85	0.75 2.119 0.75	15 45 75
WB-MOASIS	1.04	118 002 030 5	1.00	85	0.75 2.119 0.75	15 45 75
SB-FREEDOM	1.12	103 628 074 5	1.00	85	0.75 2.119 0.75	15 45 75
EB-MOASIS	1.03	041 001 058 5	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	347	155	810	105
CAPACITY	veh	2063	846	1949	620
AVE DELAY	secs	2.1	5.2	3.3	7.7
MAX DELAY	secs	3.8	9.9	6.5	15.6
AVE QUEUE	veh	0	0	1	0
MAX QUEUE	veh	0	0	1	0

AVEDEL s	3.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST $	21

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.02	112 324 085 5	1.00	50	0.75 0.830 0.75	15 45 75
WB-EVRGRN	1.01	152 158 086 5	1.00	50	0.75 0.830 0.75	15 45 75
SB-FREEDOM	1.01	057 456 059 5	1.00	50	0.75 0.830 0.75	15 45 75
EB-EVRGRN	1.02	132 300 013 5	1.00	50	0.75 0.830 0.75	15 45 75

FLOW	veh	526	401	577	450	
CAPACITY	veh	1046	1028	1082	921	
AVE DELAY	secs	6.8	5.7	7.0	7.5	
MAX DELAY	secs	7.5	6.2	7.7	8.3	
AVE QUEUE	veh	1	1	1	1	
MAX QUEUE	veh	1	1	1	1	

AVEDEL s	6.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.7
COST $	55

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	191 282 045 5	1.00	50	0.75 0.959 0.75	15 45 75
WB-EVRGRN	1.01	148 171 155 5	1.00	50	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.02	023 420 149 5	1.00	50	0.75 0.959 0.75	15 45 75
EB-EVRGRN	1.01	115 221 049 5	1.00	50	0.75 0.959 0.75	15 45 75

FLOW	veh	523	479	597	390	
CAPACITY	veh	1031	1056	1049	858	
AVE DELAY	secs	7.0	6.1	7.8	7.6	
MAX DELAY	secs	8.7	7.5	10.0	9.6	
AVE QUEUE	veh	1	1	1	1	
MAX QUEUE	veh	1	1	2	1	

AVEDEL s	7.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.9
COST $	59

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E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.02	112 324 085 5	1.00	85	0.75 0.830 0.75	15 45 75
WB-EVRGRN	1.01	152 158 086 5	1.00	85	0.75 0.830 0.75	15 45 75
SB-FREEDOM	1.01	057 456 059 5	1.00	85	0.75 0.830 0.75	15 45 75
EB-EVRGRN	1.02	132 300 013 5	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	526	401	577	450
CAPACITY	veh	844	823	877	718
AVE DELAY	secs	11.0	8.4	11.6	13.0
MAX DELAY	secs	12.4	9.2	13.2	14.9
AVE QUEUE	veh	2	1	2	2
MAX QUEUE	veh	2	1	2	2

AVEDEL s	11.1
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	6.0
COST $	90

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E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	191 282 045 5	1.00	85	0.75 0.959 0.75	15 45 75
WB-EVRGRN	1.01	148 171 155 5	1.00	85	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.02	023 420 149 5	1.00	85	0.75 0.959 0.75	15 45 75
EB-EVRGRN	1.01	115 221 049 5	1.00	85	0.75 0.959 0.75	15 45 75

FLOW	veh	523	479	597	390	
CAPACITY	veh	827	851	846	654	
AVE DELAY	secs	11.6	9.5	14.2	13.5	
MAX DELAY	secs	15.4	12.1	19.5	18.3	
AVE QUEUE	veh	2	1	2	2	
MAX QUEUE	veh	2	2	3	2	

AVEDEL	s 12.3
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	6.8
COST	$ 102

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E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	000 356 286 5	1.00	50	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	172 000 148 0	1.00	50	0.75 1.123 0.75	15 45 75
SB-FREEDOM	1.03	089 765 000 5	1.00	50	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	647	320	859	0	
CAPACITY	veh	2403	938	2037	785	
AVE DELAY	secs	2.0	5.8	3.0	0.0	
MAX DELAY	secs	2.6	7.9	4.1	0.0	
AVE QUEUE	veh	0	1	1	0	
MAX QUEUE	veh	0	1	1	0	

AVEDEL s	3.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.6
COST $	24

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E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	000	437	179	5	1.00	50	0.75 1.398 0.75	15 45 75
WB-SB41OFF	1.01	151	000	181	0	1.00	50	0.75 1.398 0.75	15 45 75
SB-FREEDOM	1.01	215	540	000	5	1.00	50	0.75 1.398 0.75	15 45 75
EB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.398 0.75	15 45 75

FLOW	veh	621	332	760	0
CAPACITY	veh	2403	952	2133	896
AVE DELAY	secs	2.0	5.9	2.6	0.0
MAX DELAY	secs	2.9	9.4	4.0	0.0
AVE QUEUE	veh	0	1	1	0
MAX QUEUE	veh	0	1	1	0

AVEDEL s	3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST $	22

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E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	000 356 286 5	1.00	85	0.75 1.123 0.75	15 45 75
WB-SB41OFF	1.01	172 000 148 0	1.00	85	0.75 1.123 0.75	15 45 75
SB-FREEDOM	1.03	089 765 000 5	1.00	85	0.75 1.123 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.123 0.75	15 45 75

FLOW	veh	647	320	859	0	
CAPACITY	veh	2198	733	1836	580	
AVE DELAY	secs	2.3	8.7	3.7	0.0	
MAX DELAY	secs	3.0	12.5	5.1	0.0	
AVE QUEUE	veh	0	1	1	0	
MAX QUEUE	veh	0	1	1	0	

AVEDEL s	4.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.1
COST $	31

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E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	000 437 179 5	1.00	85	0.75 1.398 0.75	15 45 75
WB-SB41OFF	1.01	151 000 181 0	1.00	85	0.75 1.398 0.75	15 45 75
SB-FREEDOM	1.01	215 540 000 5	1.00	85	0.75 1.398 0.75	15 45 75
EB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.398 0.75	15 45 75

FLOW	veh	621	332	760	0	
CAPACITY	veh	2198	747	1928	691	
AVE DELAY	secs	2.2	9.2	3.1	0.0	
MAX DELAY	secs	3.3	15.4	4.8	0.0	
AVE QUEUE	veh	0	1	1	0	
MAX QUEUE	veh	0	1	1	0	

AVEDEL s	4.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.9
COST $	28

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E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	20.00	20.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.04	338 452 000 5	1.00	50	0.75 0.996 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
SB-FREEDOM	1.04	000 475 161 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-NB41OFF	1.04	000 000 189 0	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	795	0	641	189	AVEDEL s	2.8
CAPACITY	veh	2051	919	2311	904	LOS SIG	A
AVE DELAY	secs	2.8	0.0	2.1	4.9	LOS UNSIG	A
MAX DELAY	secs	3.5	0.0	2.5	6.1		
AVE QUEUE	veh	1	0	0	0	VEHIC HRS	1.3
MAX QUEUE	veh	1	0	0	0	COST $	19

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E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	3.65
RAD (m)	20.00	20.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.05	585 252 000 5	1.00	50	0.75 0.959 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.03	000 542 096 5	1.00	50	0.75 0.959 0.75	15 45 75
EB-NB41OFF	1.03	000 000 329 0	1.00	50	0.75 0.959 0.75	15 45 75

FLOW veh	842	0	643	329
CAPACITY veh	1979	953	2333	915
AVE DELAY secs	3.1	0.0	2.1	6.0
MAX DELAY secs	3.8	0.0	2.5	7.4
AVE QUEUE veh	1	0	0	1
MAX QUEUE veh	1	0	0	1

AVEDEL s	3.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.7
COST $	25

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E	(m)	8.00	4.30	8.00	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	3.65	7.31	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.04	338 452 000 5	1.00	85	0.75 0.996 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
SB-FREEDOM	1.04	000 475 161 5	1.00	85	0.75 0.996 0.75	15 45 75
EB-NB41OFF	1.04	000 000 189 0	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	795	0	641	189	AVEDEL s	3.4
CAPACITY	veh	1852	714	2112	705	LOS SIG	A
AVE DELAY	secs	3.4	0.0	2.4	6.8	LOS UNSIG	A
MAX DELAY	secs	4.2	0.0	2.9	8.6		
AVE QUEUE	veh	1	0	0	0	VEHIC HRS	1.5
MAX QUEUE	veh	1	0	0	0	COST $	23

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E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	20.00	20.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.05	585 252 000 5	1.00	85	0.75 0.959 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.03	000 542 096 5	1.00	85	0.75 0.959 0.75	15 45 75
EB-NB41OFF	1.03	000 000 329 0	1.00	85	0.75 0.959 0.75	15 45 75

FLOW	veh	842	0	643	329	
CAPACITY	veh	1782	748	2132	714	
AVE DELAY	secs	3.8	0.0	2.4	9.2	
MAX DELAY	secs	4.7	0.0	2.8	11.7	
AVE QUEUE	veh	1	0	0	1	
MAX QUEUE	veh	1	0	0	1	

AVEDEL s	4.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.1
COST $	32

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E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	20.00	20.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.04	000 000 000 5	1.00	50	0.75 0.996 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
SB-FREEDOM	1.04	000 475 000 0	1.00	50	0.75 0.996 0.75	15 45 75
EB-NB41OFF	1.04	348 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	5	0	475	348	
CAPACITY	veh	2314	1272	2311	993	
AVE DELAY	secs	1.5	0.0	1.9	5.5	
MAX DELAY	secs	1.8	0.0	2.3	6.8	
AVE QUEUE	veh	0	0	0	1	
MAX QUEUE	veh	0	0	0	1	

AVEDEL s	3.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST $	12

14:1:09 YEAR 2035 FREEDOM/NB 41 RAMP-EB SEMI* 42

E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	3.65
RAD (m)	20.00	20.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.05	000 000 000 5	1.00	50	0.75 0.959 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.03	000 542 000 0	1.00	50	0.75 0.959 0.75	15 45 75
EB-NB41OFF	1.03	500 000 0000 0	1.00	50	0.75 0.959 0.75	15 45 75

FLOW	veh	5	0	542	500
CAPACITY	veh	2292	1272	2333	969
AVE DELAY	secs	1.6	0.0	2.0	7.5
MAX DELAY	secs	1.8	0.0	2.3	9.5
AVE QUEUE	veh	0	0	0	1
MAX QUEUE	veh	0	0	0	1

AVEDEL s	4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	20

14:1:09 YEAR 2035 FREEDOM/NB 41 RAMP-EB SEMI* 43

E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	20.00	20.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.04	000 000 000 5	1.00	85	0.75 0.996 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
SB-FREEDOM	1.04	000 475 000 0	1.00	85	0.75 0.996 0.75	15 45 75
EB-NB41OFF	1.04	348 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	5	0	475	348	
CAPACITY	veh	2115	1067	2112	794	
AVE DELAY	secs	1.7	0.0	2.2	7.9	
MAX DELAY	secs	2.0	0.0	2.6	10.2	
AVE QUEUE	veh	0	0	0	1	
MAX QUEUE	veh	0	0	0	1	

AVEDEL s	4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST $	16

14:1:09 YEAR 2035 FREEDOM/NB 41 RAMP-EB SEMI* 44

E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	3.65	
RAD	(m)	20.00	20.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.05	000 000 000 5	1.00	85	0.75 0.959 0.75	15 45 75
WB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.959 0.75	15 45 75
SB-FREEDOM	1.03	000 542 000 0	1.00	85	0.75 0.959 0.75	15 45 75
EB-NB41OFF	1.03	500 000 0000 0	1.00	85	0.75 0.959 0.75	15 45 75

FLOW	veh	5	0	542	500	
CAPACITY	veh	2095	1067	2132	768	
AVE DELAY	secs	1.7	0.0	2.2	13.2	
MAX DELAY	secs	1.9	0.0	2.6	17.9	
AVE QUEUE	veh	0	0	0	2	
MAX QUEUE	veh	0	0	0	2	

AVEDEL s	7.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.2
COST $	33

14:1:09 YEAR 2035 FREEDOM/MOASIS-2 LANE* 32

E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.30	3.65	
RAD	(m)	25.00	20.00	25.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	058 410 065 5	1.00	50	0.75 0.924 0.75	15 45 75
WB-MOASIS	1.04	213 009 040 5	1.00	50	0.75 0.924 0.75	15 45 75
SB-FREEDOM	1.13	093 452 236 5	1.00	50	0.75 0.924 0.75	15 45 75
EB-MOASIS	1.07	009 005 067 5	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	538	267	786	86	
CAPACITY	veh	2139	949	2063	790	
AVE DELAY	secs	2.2	5.2	2.8	5.0	
MAX DELAY	secs	2.6	6.1	3.2	5.9	
AVE QUEUE	veh	0	0	1	0	
MAX QUEUE	veh	0	0	1	0	

AVEDEL s	3.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST $	22

E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.30	3.65	
RAD	(m)	25.00	20.00	25.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.02	051 470 007 5	1.00	50	0.75 2.119 0.75	15 45 75
WB-MOASIS	1.04	145 003 034 5	1.00	50	0.75 2.119 0.75	15 45 75
SB-FREEDOM	1.12	116 758 102 5	1.00	50	0.75 2.119 0.75	15 45 75
EB-MOASIS	1.03	047 001 065 5	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	533	187	981	118	
CAPACITY	veh	2237	948	2129	728	
AVE DELAY	secs	2.1	4.9	3.4	6.5	
MAX DELAY	secs	3.9	9.4	6.7	13.3	
AVE QUEUE	veh	0	0	1	0	
MAX QUEUE	veh	0	0	1	0	

AVEDEL s	3.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.7
COST $	25

14:1:09 YEAR 2035 FREEDOM/MOASIS-2 LANE* 34

E (m)	8.00	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.30	3.65
RAD (m)	25.00	20.00	25.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.01	058 410 065 5	1.00	85	0.75 0.924 0.75	15 45 75
WB-MOASIS	1.04	213 009 040 5	1.00	85	0.75 0.924 0.75	15 45 75
SB-FREEDOM	1.13	093 452 236 5	1.00	85	0.75 0.924 0.75	15 45 75
EB-MOASIS	1.07	009 005 067 5	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	538	267	786	86
CAPACITY	veh	1934	750	1880	596
AVE DELAY	secs	2.5	7.3	3.2	6.9
MAX DELAY	secs	2.9	8.7	3.8	8.2
AVE QUEUE	veh	0	1	1	0
MAX QUEUE	veh	0	1	1	0

AVEDEL s	3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST $	27

14:1:09 YEAR 2035 FREEDOM/MOASIS-2 LANE* 35

E	(m)	8.00	4.30	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.30	3.65	
RAD	(m)	25.00	20.00	25.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-FREEDOM	1.02	051 470 007 5	1.00	85	0.75 2.119 0.75	15 45 75
WB-MOASIS	1.04	145 003 034 5	1.00	85	0.75 2.119 0.75	15 45 75
SB-FREEDOM	1.12	116 758 102 5	1.00	85	0.75 2.119 0.75	15 45 75
EB-MOASIS	1.03	047 001 065 5	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	533	187	981	118	
CAPACITY	veh	2034	749	1944	527	
AVE DELAY	secs	2.4	6.8	4.1	11.0	
MAX DELAY	secs	4.5	13.5	8.5	23.8	
AVE QUEUE	veh	0	0	1	0	
MAX QUEUE	veh	1	1	2	1	

AVEDEL s	4.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.2
COST $	33

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 13:1:09            YEAR 2020 NORTHLAND/CASALOMA-BYPASS*                133

 E    (m)   12.00  12.00  12.00  12.00          TIME PERIOD     min    90
 L'   (m)   25.00  25.00  25.00  25.00          TIME SLICE      min    15
 V    (m)   10.97   7.31  10.97  10.97          RESULTS PERIOD  min 15 75
 RAD  (m)   25.00  30.00  25.00  30.00          TIME COST      $/hr 15.00
 PHI  (d)   30.00  30.00  30.00  30.00          FLOW PERIOD     min 15 75
 DIA  (m)   65.00  65.00  65.00  65.00          FLOW TYPE   pcu/veh   VEH
 GRAD SEP       0      0      0      0          FLOW PEAK  am/op/pm    AM

 LEG NAME |PCU | TURNS (1st exit, 2nd..U)    |FLOF|CL|  FLOW RATIO   |FLOW TIME|
          |    |                            |    |  |               |         |
|NB-CASALMA|1.05|  077  059  030  5          |1.00|50|0.75 1.892 0.75|15 45 75 |
|WB-NRTHLND|1.02|  000 1043  255  5          |1.00|50|0.75 1.892 0.75|15 45 75 |
|SB-CASALMA|1.02|  304  273  344  5          |1.00|50|0.75 1.892 0.75|15 45 75 |
|EB-NRTHLND|1.01|  047 1239  221  5          |1.00|50|0.75 1.892 0.75|15 45 75 |
          |    |                            |    |  |               |         |
          |    |                            |    |  |               |         |
          |    |                            |    |  |               |         |

 FLOW        veh     171   1303    926   1512          AVEDEL  s   2.9
 CAPACITY    veh    1970   2840   2420   2855          LOS   SIG     A
 AVE DELAY  secs     2.1    2.5    2.8    3.3          LOS UNSIG     A
 MAX DELAY  secs     4.0    4.8    5.5    6.8
 AVE QUEUE   veh       0      1      1      1          VEHIC HRS   3.1
 MAX QUEUE   veh       0      1      1      2          COST    $    47
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E	(m)	12.00	12.00	12.00	12.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	10.97	7.31	10.97	10.97	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	30.00	25.00	30.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	65.00	65.00	65.00	65.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.01	394 323 110 5	1.00	50	0.75 0.996 0.75	15 45 75
WB-NRTHLND	1.01	000 1657 330 5	1.00	50	0.75 0.996 0.75	15 45 75
SB-CASALMA	1.02	243 275 221 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-NRTHLND	1.02	101 1345 479 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	832	1992	744	1930	AVEDEL s	6.1
CAPACITY	veh	1829	2402	1785	2869	LOS SIG	A
AVE DELAY	secs	3.7	10.3	3.5	3.9	LOS UNSIG	A
MAX DELAY	secs	5.1	17.2	4.8	5.4		
AVE QUEUE	veh	1	6	1	2	VEHIC HRS	9.3
MAX QUEUE	veh	1	9	1	3	COST $	140

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E	(m)	12.00	12.00	12.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	7.31	10.97	10.97	
RAD	(m)	25.00	30.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.05	077 059 030 5	1.00	85	0.75 1.892 0.75	15 45 75
WB-NRTHLND	1.02	000 1043 255 5	1.00	85	0.75 1.892 0.75	15 45 75
SB-CASALMA	1.02	304 273 344 5	1.00	85	0.75 1.892 0.75	15 45 75
EB-NRTHLND	1.01	047 1239 221 5	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	171	1303	926	1512	
CAPACITY	veh	1773	2637	2217	2650	
AVE DELAY	secs	2.4	3.0	3.4	4.2	
MAX DELAY	secs	4.6	5.8	6.9	9.0	
AVE QUEUE	veh	0	1	1	2	
MAX QUEUE	veh	0	2	1	3	

AVEDEL	s 3.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.8
COST	$ 57

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E (m)	12.00	12.00	12.00	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	10.97	7.31	10.97	10.97
RAD (m)	25.00	30.00	25.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	65.00	65.00	65.00	65.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-CASALMA	1.01	394	323	110	5	1.00	85	0.75	0.996	0.75	15	45	75
WB-NRTHLND	1.01	000	1657	330	5	1.00	85	0.75	0.996	0.75	15	45	75
SB-CASALMA	1.02	243	275	221	5	1.00	85	0.75	0.996	0.75	15	45	75
EB-NRTHLND	1.02	101	1345	479	5	1.00	85	0.75	0.996	0.75	15	45	75

FLOW	veh	832	1992	744	1930
CAPACITY	veh	1624	2197	1583	2667
AVE DELAY	secs	4.7	26.5	4.3	5.0
MAX DELAY	secs	6.7	54.2	6.0	7.3
AVE QUEUE	veh	1	15	1	3
MAX QUEUE	veh	1	29	1	4

AVEDEL	s 12.7
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	19.3
COST	$ 290

13:1:09 YEAR 2020 NORTHLAND/CASALOMA-WB SEMI* 60

E	(m)	12.00	4.30	12.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	3.65	10.97	10.97	
RAD	(m)	25.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.05	000 059 000 0	1.00	50	0.75 1.892 0.75	15 45 75
WB-NRTHLND	1.02	314 0000 000 0	1.00	50	0.75 1.892 0.75	15 45 75
SB-CASALMA	1.02	000 000 000 5	1.00	50	0.75 1.892 0.75	15 45 75
EB-NRTHLND	1.01	000 0000 221 0	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	59	314	5	221	
CAPACITY	veh	3277	1150	3587	3618	
AVE DELAY	secs	1.1	4.3	1.0	1.0	
MAX DELAY	secs	1.8	7.7	1.6	1.7	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	1	0	0	

AVEDEL	s 2.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.5
COST	$ 7

13:1:09 YEAR 2020 NORTHLAND/CASALOMA-WB SEMI* 61

E (m)	12.00	4.30	12.00	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	10.97	3.65	10.97	10.97
RAD (m)	25.00	30.00	30.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	65.00	65.00	65.00	65.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.01	000 323 000 0	1.00	50	0.75 0.996 0.75	15 45 75
WB-NRTHLND	1.01	277 0000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
SB-CASALMA	1.02	000 000 000 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-NRTHLND	1.02	000 0000 479 0	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	323	277	5	479
CAPACITY	veh	3183	915	3587	3582
AVE DELAY	secs	1.2	5.5	1.0	1.1
MAX DELAY	secs	1.5	7.0	1.2	1.4
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL s	2.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.7
COST $	10

13:1:09 YEAR 2020 NORTHLAND/CASALOMA-WB SEMI* 62

E	(m)	12.00	4.30	12.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	3.65	10.97	10.97	
RAD	(m)	25.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.05	000 059 000 0	1.00	85	0.75 1.892 0.75	15 45 75
WB-NRTHLND	1.02	314 0000 000 0	1.00	85	0.75 1.892 0.75	15 45 75
SB-CASALMA	1.02	000 000 000 5	1.00	85	0.75 1.892 0.75	15 45 75
EB-NRTHLND	1.01	000 0000 221 0	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	59	314	5	221	
CAPACITY	veh	3080	947	3384	3413	
AVE DELAY	secs	1.2	5.8	1.0	1.1	
MAX DELAY	secs	1.9	10.6	1.7	1.8	
AVE QUEUE	veh	0	1	0	0	
MAX QUEUE	veh	0	1	0	0	

AVEDEL	s 3.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.6
COST	$ 9

E	(m)	12.00	4.30	12.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	3.65	10.97	10.97	
RAD	(m)	25.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.01	000 323 000 0	1.00	85	0.75 0.996 0.75	15 45 75
WB-NRTHLND	1.01	277 0000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
SB-CASALMA	1.02	000 000 000 5	1.00	85	0.75 0.996 0.75	15 45 75
EB-NRTHLND	1.02	000 0000 479 0	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	323	277	5	479
CAPACITY	veh	2978	710	3384	3379
AVE DELAY	secs	1.3	8.2	1.1	1.2
MAX DELAY	secs	1.6	10.6	1.2	1.4
AVE QUEUE	veh	0	1	0	0
MAX QUEUE	veh	0	1	0	0

AVEDEL s	3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.9
COST $	14

4:2:09 YEAR 2020 NORTHLAND/SB 41 RAMP-BYPASS* 195

E (m)	8.00	4.30	12.00
L' (m)	25.00	25.00	25.00
V (m)	7.31	3.65	7.31
RAD (m)	30.00	25.00	30.00
PHI (d)	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.03	000 903 5	1.00	50	0.75 2.119 0.75	15 45 75
SB-SB41OFF	1.02	000 331 5	1.00	50	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.02	1460 254 5	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	908	336	1719
CAPACITY	veh	2194	823	2814
AVE DELAY	secs	3.0	9.4	4.5
MAX DELAY	secs	5.9	20.4	10.0
AVE QUEUE	veh	1	1	2
MAX QUEUE	veh	1	1	4

AVEDEL s	4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.8
COST $	56

4:2:09 YEAR 2020 NORTHLAND/SB 41 RAMP-BYPASS* 196

E (m)	8.00	4.30	12.00
L' (m)	25.00	25.00	25.00
V (m)	7.31	3.65	7.31
RAD (m)	30.00	25.00	30.00
PHI (d)	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.01	000 1420 5	1.00	50	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.03	000 202 5	1.00	50	0.75 1.170 0.75	15 45 75
EB-NRTHLND	1.02	1576 375 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	1425	207	1956
CAPACITY	veh	2154	575	2918
AVE DELAY	secs	5.2	10.3	3.9
MAX DELAY	secs	8.2	16.3	6.1
AVE QUEUE	veh	2	1	2
MAX QUEUE	veh	3	1	3

AVEDEL s	4.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.8
COST $	72

4:2:09 YEAR 2020 NORTHLAND/SB 41 RAMP-BYPASS* 197

E	(m)	8.00	4.30	12.00		TIME PERIOD	min	90			
L'	(m)	25.00	25.00	25.00		TIME SLICE	min	15			
V	(m)	7.31	3.65	7.31		RESULTS PERIOD	min	15	75		
RAD	(m)	30.00	25.00	30.00		TIME COST	$/hr	15.00			
PHI	(d)	30.00	30.00	30.00		FLOW PERIOD	min	15	75		
DIA	(m)	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH			
GRAD SEP		0	0	0		FLOW PEAK	am/op/pm	AM			

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.03	000 903 5	1.00	85	0.75 2.119 0.75	15 45 75
SB-SB41OFF	1.02	000 331 5	1.00	85	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.02	1460 254 5	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	908	336	1719		AVEDEL	s	7.6
CAPACITY	veh	1994	620	2612		LOS SIG		A
AVE DELAY	secs	3.6	25.0	6.3		LOS UNSIG		A
MAX DELAY	secs	7.4	60.0	14.9				
AVE QUEUE	veh	1	2	3		VEHIC HRS		6.3
MAX QUEUE	veh	1	4	5		COST	$	94

4:2:09 YEAR 2020 NORTHLAND/SB 41 RAMP-BYPASS* 198

E	(m)	8.00	4.30	12.00		TIME PERIOD	min	90			
L'	(m)	25.00	25.00	25.00		TIME SLICE	min	15			
V	(m)	7.31	3.65	7.31		RESULTS PERIOD	min	15	75		
RAD	(m)	30.00	25.00	30.00		TIME COST	$/hr	15.00			
PHI	(d)	30.00	30.00	30.00		FLOW PERIOD	min	15	75		
DIA	(m)	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH			
GRAD SEP		0	0	0		FLOW PEAK	am/op/pm	PM			

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.01	000 1420 5	1.00	85	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.03	000 202 5	1.00	85	0.75 1.170 0.75	15 45 75
EB-NRTHLND	1.02	1576 375 5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	1425	207	1956		AVEDEL	s	7.6
CAPACITY	veh	1949	374	2715		LOS SIG		A
AVE DELAY	secs	7.7	29.7	5.1		LOS UNSIG		A
MAX DELAY	secs	12.8	55.6	8.4				
AVE QUEUE	veh	3	2	3		VEHIC HRS		7.5
MAX QUEUE	veh	5	3	4		COST	$	113

13:1:09 YEAR 2020 NORTHLAND/SB 41 RAMP-WB SEMI* 92

E	(m)	4.30	8.00	12.00		TIME PERIOD	min	90			
L'	(m)	25.00	25.00	25.00		TIME SLICE	min	15			
V	(m)	3.65	7.31	10.97		RESULTS PERIOD	min	15	75		
RAD	(m)	25.00	25.00	30.00		TIME COST	$/hr	15.00			
PHI	(d)	30.00	30.00	30.00		FLOW PERIOD	min	15	75		
DIA	(m)	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH			
GRAD SEP		0	0	0		FLOW PEAK	am/op/pm	AM			

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.03	692 000 0	1.00	50	0.75 2.119 0.75	15 45 75
SB-SB41OFF	1.02	000 000 5	1.00	50	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.02	0000 254 0	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	692	5	254		AVEDEL	s	8.1
CAPACITY	veh	1137	2383	3582		LOS SIG		A
AVE DELAY	secs	10.8	1.5	1.0		LOS UNSIG		A
MAX DELAY	secs	24.1	2.5	1.9				
AVE QUEUE	veh	2	0	0		VEHIC HRS		2.2
MAX QUEUE	veh	4	0	0		COST	$	32

13:1:09 YEAR 2020 NORTHLAND/SB 41 RAMP-WB SEMI* 93

E	(m)	4.30	8.00	12.00		TIME PERIOD	min	90			
L'	(m)	25.00	25.00	25.00		TIME SLICE	min	15			
V	(m)	3.65	7.31	10.97		RESULTS PERIOD	min	15	75		
RAD	(m)	25.00	25.00	30.00		TIME COST	$/hr	15.00			
PHI	(d)	30.00	30.00	30.00		FLOW PERIOD	min	15	75		
DIA	(m)	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH			
GRAD SEP		0	0	0		FLOW PEAK	am/op/pm	PM			

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.01	429 0000 0	1.00	50	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.03	000 000 5	1.00	50	0.75 1.170 0.75	15 45 75
EB-NRTHLND	1.02	0000 375 0	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	429	5	375		AVEDEL	s	3.3
CAPACITY	veh	1099	2360	3582		LOS SIG		A
AVE DELAY	secs	5.3	1.5	1.1		LOS UNSIG		A
MAX DELAY	secs	7.4	1.9	1.4				
AVE QUEUE	veh	1	0	0		VEHIC HRS		0.7
MAX QUEUE	veh	1	0	0		COST	$	11

13:1:09 YEAR 2020 NORTHLAND/SB 41 RAMP-WB SEMI* 94

E	(m)	4.30	8.00	12.00		TIME PERIOD	min	90		
L'	(m)	25.00	25.00	25.00		TIME SLICE	min	15		
V	(m)	3.65	7.31	10.97		RESULTS PERIOD	min	15	75	
RAD	(m)	25.00	25.00	30.00		TIME COST	$/hr	15.00		
PHI	(d)	30.00	30.00	30.00		FLOW PERIOD	min	15	75	
DIA	(m)	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH		
GRAD SEP		0	0	0		FLOW PEAK	am/op/pm	AM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.03	692 000 0	1.00	85	0.75 2.119 0.75	15 45 75
SB-SB41OFF	1.02	000 000 5	1.00	85	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.02	0000 254 0	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	692	5	254		AVEDEL	s	24.9
CAPACITY	veh	936	2180	3379		LOS SIG		C
AVE DELAY	secs	33.7	1.6	1.1		LOS UNSIG		C
MAX DELAY	secs	85.4	2.8	2.0				
AVE QUEUE	veh	7	0	0		VEHIC HRS		6.6
MAX QUEUE	veh	13	0	0		COST	$	98

13:1:09 YEAR 2020 NORTHLAND/SB 41 RAMP-WB SEMI* 95

E	(m)	4.30	8.00	12.00		TIME PERIOD	min	90			
L'	(m)	25.00	25.00	25.00		TIME SLICE	min	15			
V	(m)	3.65	7.31	10.97		RESULTS PERIOD	min	15	75		
RAD	(m)	25.00	25.00	30.00		TIME COST	$/hr	15.00			
PHI	(d)	30.00	30.00	30.00		FLOW PERIOD	min	15	75		
DIA	(m)	60.00	60.00	60.00		FLOW TYPE	pcu/veh	VEH			
GRAD SEP		0	0	0		FLOW PEAK	am/op/pm	PM			

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.01	429 0000 0	1.00	85	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.03	000 000 5	1.00	85	0.75 1.170 0.75	15 45 75
EB-NRTHLND	1.02	0000 375 0	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	429	5	375		AVEDEL	s	4.6
CAPACITY	veh	894	2159	3379		LOS SIG		A
AVE DELAY	secs	7.7	1.6	1.2		LOS UNSIG		A
MAX DELAY	secs	11.1	2.1	1.5				
AVE QUEUE	veh	1	0	0		VEHIC HRS		1.0
MAX QUEUE	veh	1	0	0		COST	$	16

13:1:09 YEAR 2020 NORTHLAND/NB 41 RAMP-NB BYP* 91

E (m)	8.00	12.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	10.97	3.65	7.31
RAD (m)	25.00	30.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	000 000 541 5	1.00	50	0.75 2.119 0.75	15 45 75
WB-NRTHLND	1.02	085 1378 000 5	1.00	50	0.75 2.119 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.01	000 1100 540 5	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	546	1468	0	1645
CAPACITY	veh	1192	2580	314	2399
AVE DELAY	secs	9.9	5.1	0.0	7.3
MAX DELAY	secs	23.9	12.1	0.0	17.1
AVE QUEUE	veh	2	2	0	3
MAX QUEUE	veh	3	4	0	6

AVEDEL s	6.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.0
COST $	104

13:1:09 YEAR 2020 NORTHLAND/NB 41 RAMP-NB BYP* 92

E	(m)	8.00	12.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	10.97	3.65	7.31	
RAD	(m)	25.00	30.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	000 000 361 5	1.00	50	0.75 0.996 0.75	15 45 75
WB-NRTHLND	1.01	210 1535 000 5	1.00	50	0.75 0.996 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-NRTHLND	1.01	000 1252 517 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	366	1750	5	1774	
CAPACITY	veh	1160	2812	347	2396	
AVE DELAY	secs	4.5	3.4	5.0	5.8	
MAX DELAY	secs	6.0	4.7	5.0	8.2	
AVE QUEUE	veh	0	2	0	3	
MAX QUEUE	veh	1	2	0	4	

AVEDEL	s 4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.0
COST	$ 75

13:1:09 YEAR 2020 NORTHLAND/NB 41 RAMP-NB BYP* 93

E	(m)	8.00	12.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	10.97	3.65	7.31	
RAD	(m)	25.00	30.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	000 000 541 5	1.00	85	0.75 2.119 0.75	15 45 75
WB-NRTHLND	1.02	085 1378 000 5	1.00	85	0.75 2.119 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.01	000 1100 540 5	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	546	1468	0	1645
CAPACITY	veh	1000	2377	173	2194
AVE DELAY	secs	27.2	7.7	0.0	14.6
MAX DELAY	secs	73.6	19.2	0.0	36.9
AVE QUEUE	veh	4	3	0	7
MAX QUEUE	veh	9	6	0	13

AVEDEL	s 13.7
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	13.9
COST	$ 209

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 13:1:09          YEAR 2020 NORTHLAND/NB 41 RAMP-NB BYP*                94

 E    (m)    8.00  12.00   4.30   8.00          | TIME PERIOD     min    90
 L'   (m)   25.00  25.00  25.00  25.00          | TIME SLICE      min    15
 V    (m)    7.31  10.97   3.65   7.31          | RESULTS PERIOD  min 15 75
 RAD  (m)   25.00  30.00  25.00  25.00          | TIME COST      $/hr 15.00
 PHI  (d)   30.00  30.00  30.00  30.00          | FLOW PERIOD     min 15 75
 DIA  (m)   60.00  60.00  60.00  60.00          | FLOW TYPE   pcu/veh   VEH
 GRAD SEP       0      0      0      0          | FLOW PEAK  am/op/pm    PM

 LEG NAME |PCU | TURNS (1st exit, 2nd..U)    |FLOF|CL|  FLOW RATIO   |FLOW TIME|
          |    |                             |    |  |               |         |
|NB-NB41OFF|1.03|  000  000  361  5          |1.00|85|0.75 0.996 0.75|15 45 75 |
|WB-NRTHLND|1.01|  210 1535  000  5          |1.00|85|0.75 0.996 0.75|15 45 75 |
|SB-NB41ON |1.01|  000  000  000  5          |1.00|85|0.75 0.996 0.75|15 45 75 |
|EB-NRTHLND|1.01|  000 1252  517  5          |1.00|85|0.75 0.996 0.75|15 45 75 |
          |    |                             |    |  |               |         |
          |    |                             |    |  |               |         |
          |    |                             |    |  |               |         |

                                                    |
 FLOW        veh     366   1750      5   1774       | AVEDEL  s   6.6
 CAPACITY    veh     959   2607    142   2191       | LOS   SIG     A
 AVE DELAY  secs     6.1    4.3    5.0    9.0       | LOS UNSIG     A
 MAX DELAY  secs     8.5    6.1    5.0   13.5       |
 AVE QUEUE   veh       1      2      0      5       | VEHIC HRS   7.2
 MAX QUEUE   veh       1      3      0      6       | COST    $   108
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13:1:09 YEAR 2020 NORTHLAND/BLUEMOUND-NB/EB BYP* 176

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.03	000 081 131 5	1.00	50	0.75 1.276 0.75	15 45 75
WB-NRTHLND	1.01	000 1060 407 5	1.00	50	0.75 1.276 0.75	15 45 75
SB-BLUMND	1.01	149 228 102 5	1.00	50	0.75 1.276 0.75	15 45 75
EB-NRTHLND	1.01	000 875 064 5	1.00	50	0.75 1.276 0.75	15 45 75

FLOW	veh	217	1472	484	944	
CAPACITY	veh	1584	2185	1196	1843	
AVE DELAY	secs	2.6	5.5	5.6	4.2	
MAX DELAY	secs	3.8	9.4	9.5	6.6	
AVE QUEUE	veh	0	2	1	1	
MAX QUEUE	veh	0	3	1	2	

AVEDEL	s 4.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.3
COST	$ 64

13:1:09 YEAR 2020 NORTHLAND/BLUEMOUND-NB/EB BYP* 177

E (m)	8.00	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.01	000 261 398 5	1.00	50	0.75 0.802 0.75	15 45 75
WB-NRTHLND	1.01	000 1154 276 5	1.00	50	0.75 0.802 0.75	15 45 75
SB-BLUMND	1.01	128 118 045 5	1.00	50	0.75 0.802 0.75	15 45 75
EB-NRTHLND	1.01	000 1520 287 5	1.00	50	0.75 0.802 0.75	15 45 75

FLOW	veh	664	1435	296	1812
CAPACITY	veh	1008	1687	1026	2066
AVE DELAY	secs	10.1	13.5	4.9	13.2
MAX DELAY	secs	11.7	16.2	5.3	15.8
AVE QUEUE	veh	2	6	0	7
MAX QUEUE	veh	2	6	0	8

AVEDEL	s 12.2
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	14.3
COST	$ 215

13:1:09 YEAR 2020 NORTHLAND/BLUEMOUND-NB/EB BYP* 178

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.03	000 081 131 5	1.00	85	0.75 1.276 0.75	15 45 75
WB-NRTHLND	1.01	000 1060 407 5	1.00	85	0.75 1.276 0.75	15 45 75
SB-BLUMND	1.01	149 228 102 5	1.00	85	0.75 1.276 0.75	15 45 75
EB-NRTHLND	1.01	000 875 064 5	1.00	85	0.75 1.276 0.75	15 45 75

FLOW	veh	217	1472	484	944	
CAPACITY	veh	1383	1980	991	1638	
AVE DELAY	secs	3.1	8.6	8.7	5.6	
MAX DELAY	secs	4.5	15.6	16.0	9.3	
AVE QUEUE	veh	0	4	1	2	
MAX QUEUE	veh	0	6	2	2	

AVEDEL	s 7.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.3
COST	$ 95

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|                                                                              |
|  13:1:09          YEAR 2020 NORTHLAND/BLUEMOUND-NB/EB BYP*             179   |
|                                                                              |
|------------------------------------------------------------------------------|
|                                                 |                            |
| E    (m)    8.00   8.00   8.00   8.00           | TIME PERIOD     min    90  |
| L'   (m)   25.00  25.00  25.00  25.00           | TIME SLICE      min    15  |
| V    (m)    7.31   7.31   7.31   7.31           | RESULTS PERIOD  min 15 75  |
| RAD  (m)   25.00  25.00  25.00  25.00           | TIME COST      $/hr 15.00  |
| PHI  (d)   30.00  30.00  30.00  30.00           | FLOW PERIOD     min 15 75  |
| DIA  (m)   50.00  50.00  50.00  50.00           | FLOW TYPE   pcu/veh   VEH  |
| GRAD SEP       0      0      0      0           | FLOW PEAK  am/op/pm    PM  |
|                                                 |                            |
|------------------------------------------------------------------------------|
| LEG NAME |PCU | TURNS (1st exit, 2nd..U)    |FLOF|CL|  FLOW RATIO   |FLOW TIME|
|          |    |                             |    |  |               |         |
|NB-BLUMND |1.01|  000  261  398  5           |1.00|85|0.75 0.802 0.75|15 45 75 |
|WB-NRTHLND|1.01|  000 1154  276  5           |1.00|85|0.75 0.802 0.75|15 45 75 |
|SB-BLUMND |1.01|  128  118  045  5           |1.00|85|0.75 0.802 0.75|15 45 75 |
|EB-NRTHLND|1.01|  000 1520  287  5           |1.00|85|0.75 0.802 0.75|15 45 75 |
|          |    |                             |    |  |               |         |
|          |    |                             |    |  |               |         |
|          |    |                             |    |  |               |         |
|------------------------------------------------------------------------------|
|                                                          |                   |
| FLOW        veh     664   1435    296   1812            | AVEDEL  s  36.7   |
| CAPACITY    veh     815   1485    832   1864            | LOS   SIG     D   |
| AVE DELAY  secs    21.8   44.3    6.5   41.1            | LOS UNSIG     E   |
| MAX DELAY  secs    27.5   63.2    7.2   57.5            |                   |
| AVE QUEUE   veh       4     20      1     23            | VEHIC HRS  42.9   |
| MAX QUEUE   veh       5     25      1     29            | COST    $   644   |
|                                                          |                   |
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13:1:09 YEAR 2020 NORTHLAND/BLUEMOUND-WB SEMI* 92

E	(m)	8.00	4.30	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.03	000 081 000 0	1.00	50	0.75 1.276 0.75	15 45 75
WB-NRTHLND	1.01	056 0000 000 0	1.00	50	0.75 1.276 0.75	15 45 75
SB-BLUMND	1.01	000 000 000 5	1.00	50	0.75 1.276 0.75	15 45 75
EB-NRTHLND	1.01	000 000 064 0	1.00	50	0.75 1.276 0.75	15 45 75

FLOW	veh	81	56	5	64	
CAPACITY	veh	2309	1206	2407	2403	
AVE DELAY	secs	1.6	3.0	1.5	1.5	
MAX DELAY	secs	2.1	4.1	2.0	2.0	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL s	2.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.1
COST $	2

13:1:09 YEAR 2020 NORTHLAND/BLUEMOUND-WB SEMI* 93

E (m)	8.00	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.01	000 261 000 0	1.00	50	0.75 0.802 0.75	15 45 75
WB-NRTHLND	1.01	115 0000 000 0	1.00	50	0.75 0.802 0.75	15 45 75
SB-BLUMND	1.01	000 000 000 5	1.00	50	0.75 0.802 0.75	15 45 75
EB-NRTHLND	1.01	000 0000 287 0	1.00	50	0.75 0.802 0.75	15 45 75

FLOW	veh	261	115	5	287
CAPACITY	veh	2188	991	2407	2403
AVE DELAY	secs	1.8	4.0	1.5	1.7
MAX DELAY	secs	1.9	4.3	1.5	1.8
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL s	2.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.4
COST $	6

13:1:09 YEAR 2020 NORTHLAND/BLUEMOUND-WB SEMI* 94

E	(m)	8.00	4.30	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.03	000 081 000 0	1.00	85	0.75 1.276 0.75	15 45 75
WB-NRTHLND	1.01	056 0000 000 0	1.00	85	0.75 1.276 0.75	15 45 75
SB-BLUMND	1.01	000 000 000 5	1.00	85	0.75 1.276 0.75	15 45 75
EB-NRTHLND	1.01	000 000 064 0	1.00	85	0.75 1.276 0.75	15 45 75

FLOW	veh	81	56	5	64
CAPACITY	veh	2108	1001	2202	2198
AVE DELAY	secs	1.7	3.7	1.6	1.6
MAX DELAY	secs	2.3	5.0	2.1	2.2
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 2.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.1
COST	$ 2

13:1:09 YEAR 2020 NORTHLAND/BLUEMOUND-WB SEMI* 95

E	(m)	8.00	4.30	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.01	000 261 000 0	1.00	85	0.75 0.802 0.75	15 45 75
WB-NRTHLND	1.01	115 0000 000 0	1.00	85	0.75 0.802 0.75	15 45 75
SB-BLUMND	1.01	000 000 000 5	1.00	85	0.75 0.802 0.75	15 45 75
EB-NRTHLND	1.01	000 0000 287 0	1.00	85	0.75 0.802 0.75	15 45 75

FLOW	veh	261	115	5	287
CAPACITY	veh	1983	786	2202	2198
AVE DELAY	secs	2.1	5.2	1.6	1.9
MAX DELAY	secs	2.2	5.6	1.7	2.0
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	0

AVEDEL	s 2.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.5
COST	$ 7

15:1:09 YEAR 2035 NORTHLAND/CASALOMNA-SB/WB BYP* 78

E	(m)	12.00	12.00	12.00	15.85	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	10.97	7.31	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.05	090 142 036 5	1.00	50	0.75 1.892 0.75	15 45 75
WB-NRTHLND	1.02	000 1095 263 5	1.00	50	0.75 1.892 0.75	15 45 75
SB-CASALMA	1.02	000 308 961 5	1.00	50	0.75 1.892 0.75	15 45 75
EB-NRTHLND	1.01	097 1402 235 5	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	273	1363	1274	1739
CAPACITY	veh	1324	3217	2001	2757
AVE DELAY	secs	5.0	2.1	11.2	7.6
MAX DELAY	secs	11.2	3.9	26.8	18.5
AVE QUEUE	veh	0	1	4	4
MAX QUEUE	veh	1	1	8	7

AVEDEL	s 6.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	8.8
COST	$ 132

15:1:09 YEAR 2035 NORTHLAND/CASALOMNA-SB/WB BYP* 79

E	(m)	12.00	12.00	12.00	15.85	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	10.97	7.31	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.01	445 386 265 5	1.00	50	0.75 0.996 0.75	15 45 75
WB-NRTHLND	1.01	000 1867 372 5	1.00	50	0.75 0.996 0.75	15 45 75
SB-CASALMA	1.02	000 434 390 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-NRTHLND	1.02	107 1495 548 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	1101	2244	829	2155
CAPACITY	veh	1505	2578	1164	3057
AVE DELAY	secs	11.9	15.2	13.6	4.1
MAX DELAY	secs	21.1	28.9	24.6	6.1
AVE QUEUE	veh	4	10	3	3
MAX QUEUE	veh	6	17	5	3

AVEDEL	s 10.6
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	18.7
COST	$ 281

15:1:09 YEAR 2035 NORTHLAND/CASALOMNA-SB/WB BYP* 80

E	(m)	12.00	12.00	12.00	15.85	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	10.97	7.31	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.05	090 142 036 5	1.00	85	0.75 1.892 0.75	15 45 75
WB-NRTHLND	1.02	000 1095 263 5	1.00	85	0.75 1.892 0.75	15 45 75
SB-CASALMA	1.02	000 308 961 5	1.00	85	0.75 1.892 0.75	15 45 75
EB-NRTHLND	1.01	097 1402 235 5	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	273	1363	1274	1739
CAPACITY	veh	1127	3015	1798	2552
AVE DELAY	secs	6.9	2.3	37.3	13.6
MAX DELAY	secs	16.4	4.5	100.0	36.1
AVE QUEUE	veh	1	1	13	7
MAX QUEUE	veh	1	1	31	14

AVEDEL	s 16.4
LOS SIG	B
LOS UNSIG	C
VEHIC HRS	21.2
COST	$ 318

15:1:09 YEAR 2035 NORTHLAND/CASALOMNA-SB/WB BYP* 81

E	(m)	12.00	12.00	12.00	15.85	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	10.97	7.31	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-CASALMA	1.01	445 386 265 5	1.00	85	0.75 0.996 0.75	15 45 75
WB-NRTHLND	1.01	000 1867 372 5	1.00	85	0.75 0.996 0.75	15 45 75
SB-CASALMA	1.02	000 434 390 5	1.00	85	0.75 0.996 0.75	15 45 75
EB-NRTHLND	1.02	107 1495 548 5	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	1101	2244	829	2155
CAPACITY	veh	1303	2374	964	2859
AVE DELAY	secs	41.1	42.3	34.7	5.3
MAX DELAY	secs	90.0	93.5	69.8	8.1
AVE QUEUE	veh	13	27	9	3
MAX QUEUE	veh	28	60	16	4

AVEDEL	s 28.5
LOS SIG	C
LOS UNSIG	D
VEHIC HRS	50.1
COST	$ 752

15:1:09 YEAR 2035 NORTHLAND/SB 41 RAMP-SB/WB BYP* 139

E (m)	8.00	8.00	12.00
L' (m)	25.00	25.00	100.00
V (m)	7.31	7.31	10.97
RAD (m)	30.00	30.00	30.00
PHI (d)	30.00	30.00	29.00
DIA (m)	65.00	65.00	65.00
GRAD SEP	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.03	000 1330 5	1.00	50	0.75 2.119 0.75	15 45 75
SB-SB41OFF	1.02	000 373 5	1.00	50	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.02	2167 372 5	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	1335	378	2544
CAPACITY	veh	2127	1510	3294
AVE DELAY	secs	6.5	3.6	22.0
MAX DELAY	secs	14.8	7.4	61.5
AVE QUEUE	veh	2	0	16
MAX QUEUE	veh	4	1	35

AVEDEL s	15.5
LOS SIG	B
LOS UNSIG	C
VEHIC HRS	18.3
COST $	275

15:1:09 YEAR 2035 NORTHLAND/SB 41 RAMP-SB/WB BYP* 140

E (m)	8.00	8.00	12.00
L' (m)	25.00	25.00	100.00
V (m)	7.31	7.31	10.97
RAD (m)	30.00	30.00	30.00
PHI (d)	30.00	30.00	29.00
DIA (m)	65.00	65.00	65.00
GRAD SEP	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.01	000 1726 5	1.00	50	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.03	000 228 5	1.00	50	0.75 1.170 0.75	15 45 75
EB-NRTHLND	1.02	1690 403 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	1731	233	2098
CAPACITY	veh	2148	1258	3418
AVE DELAY	secs	11.2	3.5	2.8
MAX DELAY	secs	20.6	5.1	4.2
AVE QUEUE	veh	6	0	2
MAX QUEUE	veh	9	0	2

AVEDEL s	6.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.2
COST $	108

15:1:09 YEAR 2035 NORTHLAND/SB 41 RAMP-SB/WB BYP* 141

E (m)	8.00	8.00	12.00
L' (m)	25.00	25.00	100.00
V (m)	7.31	7.31	10.97
RAD (m)	30.00	30.00	30.00
PHI (d)	30.00	30.00	29.00
DIA (m)	65.00	65.00	65.00
GRAD SEP	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.03	000 1330 5	1.00	85	0.75 2.119 0.75	15 45 75
SB-SB41OFF	1.02	000 373 5	1.00	85	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.02	2167 372 5	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	1335	378	2544
CAPACITY	veh	1926	1307	3091
AVE DELAY	secs	10.9	4.6	58.7
MAX DELAY	secs	26.3	9.8	163.9
AVE QUEUE	veh	4	0	42
MAX QUEUE	veh	7	1	105

AVEDEL	s 38.9
LOS SIG	D
LOS UNSIG	E
VEHIC HRS	46.0
COST	$ 690

15:1:09 YEAR 2035 NORTHLAND/SB 41 RAMP-SB/WB BYP* 142

E (m)	8.00	8.00	12.00
L' (m)	25.00	25.00	100.00
V (m)	7.31	7.31	10.97
RAD (m)	30.00	30.00	30.00
PHI (d)	30.00	30.00	29.00
DIA (m)	65.00	65.00	65.00
GRAD SEP	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-NRTHLND	1.01	000 1726 5	1.00	85	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.03	000 228 5	1.00	85	0.75 1.170 0.75	15 45 75
EB-NRTHLND	1.02	1690 403 5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	1731	233	2098
CAPACITY	veh	1943	1057	3215
AVE DELAY	secs	32.4	4.3	3.4
MAX DELAY	secs	72.2	6.4	5.2
AVE QUEUE	veh	16	0	2
MAX QUEUE	veh	33	0	3

AVEDEL	s 15.8
LOS SIG	B
LOS UNSIG	C
VEHIC HRS	17.8
COST	$ 267

15:1:09 YEAR 2035 NORTHLAND/NB 41 RAMP-NB BYP* 81

E	(m)	12.00	12.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	10.97	3.65	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	70.00	70.00	70.00	70.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	000	000	599	0	1.00	50	0.75 2.119 0.75	15 45 75
WB-NRTHLND	1.02	098	1703	000	5	1.00	50	0.75 2.119 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	50	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.01	000	1929	609	5	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	599	1806	0	2543
CAPACITY	veh	1440	2571	243	3618
AVE DELAY	secs	11.2	20.3	0.0	5.7
MAX DELAY	secs	28.4	56.4	0.0	13.4
AVE QUEUE	veh	2	10	0	4
MAX QUEUE	veh	4	22	0	7

AVEDEL	s 11.7
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	16.1
COST	$ 241

15:1:09 YEAR 2035 NORTHLAND/NB 41 RAMP-NB BYP* 82

E	(m)	12.00	12.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	10.97	3.65	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	70.00	70.00	70.00	70.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.03	000	000	545	5	1.00	50	0.75	0.996	0.75	15	45	75
WB-NRTHLND	1.01	223	1614	000	5	1.00	50	0.75	0.996	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	5	1.00	50	0.75	0.996	0.75	15	45	75
EB-NRTHLND	1.01	000	1303	583	5	1.00	50	0.75	0.996	0.75	15	45	75

FLOW	veh	550	1842	5	1891
CAPACITY	veh	2028	2679	317	3610
AVE DELAY	secs	2.4	4.4	5.0	2.1
MAX DELAY	secs	3.1	6.4	5.0	2.6
AVE QUEUE	veh	0	2	0	1
MAX QUEUE	veh	0	3	0	1

AVEDEL	s 3.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.7
COST	$ 56

15:1:09 YEAR 2035 NORTHLAND/NB 41 RAMP-NB BYP* 83

E (m)	12.00	12.00	4.30	12.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	10.97	10.97	3.65	10.97
RAD (m)	30.00	30.00	30.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	70.00	70.00	70.00	70.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	000	000	599	0	1.00	85	0.75 2.119 0.75	15 45 75
WB-NRTHLND	1.02	098	1703	000	5	1.00	85	0.75 2.119 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	85	0.75 2.119 0.75	15 45 75
EB-NRTHLND	1.01	000	1929	609	5	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	599	1806	0	2543
CAPACITY	veh	1248	2369	112	3413
AVE DELAY	secs	39.3	59.4	0.0	9.4
MAX DELAY	secs	111.8	166.4	0.0	23.6
AVE QUEUE	veh	7	30	0	7
MAX QUEUE	veh	16	76	0	13

AVEDEL	s 31.3
LOS SIG	C
LOS UNSIG	D
VEHIC HRS	43.0
COST	$ 645

15:1:09 YEAR 2035 NORTHLAND/NB 41 RAMP-NB BYP* 84

E	(m)	12.00	12.00	4.30	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	10.97	3.65	10.97	
RAD	(m)	30.00	30.00	30.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	70.00	70.00	70.00	70.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.03		000	000	545	5	1.00	85	0.75	0.996	0.75	15	45 75
WB-NRTHLND	1.01		223	1614	000	5	1.00	85	0.75	0.996	0.75	15	45 75
SB-NB41ON	1.01		000	000	000	5	1.00	85	0.75	0.996	0.75	15	45 75
EB-NRTHLND	1.01		000	1303	583	5	1.00	85	0.75	0.996	0.75	15	45 75

FLOW	veh	550	1842	5	1891	
CAPACITY	veh	1827	2474	113	3405	
AVE DELAY	secs	2.8	6.1	5.0	2.3	
MAX DELAY	secs	3.7	9.3	5.0	3.0	
AVE QUEUE	veh	0	3	0	1	
MAX QUEUE	veh	1	4	0	1	

AVEDEL	s 4.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.9
COST	$ 73

15:1:09 YEAR 2035 NORTHLAND/BLUEMOUND-EB BYP* 103

E	(m)	12.00	12.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	7.31	7.31	7.31	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.03	110 158 146 5	1.00	50	0.75 1.276 0.75	15 45 75
WB-NRTHLND	1.01	060 1225 459 5	1.00	50	0.75 1.276 0.75	15 45 75
SB-BLUMND	1.01	192 250 157 5	1.00	50	0.75 1.276 0.75	15 45 75
EB-NRTHLND	1.01	000 1495 069 5	1.00	50	0.75 1.276 0.75	15 45 75

FLOW	veh	419	1749	604	1569	
CAPACITY	veh	2094	2799	1201	2441	
AVE DELAY	secs	2.2	3.6	7.2	4.7	
MAX DELAY	secs	3.3	5.9	12.8	8.0	
AVE QUEUE	veh	0	2	1	2	
MAX QUEUE	veh	0	3	2	3	

AVEDEL s	4.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.3
COST $	79

15:1:09 YEAR 2035 NORTHLAND/BLUEMOUND-EB BYP* 104

E	(m)	12.00	12.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	7.31	7.31	7.31	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.01	441 470 417 5	1.00	50	0.75 0.802 0.75	15 45 75
WB-NRTHLND	1.01	294 1270 289 5	1.00	50	0.75 0.802 0.75	15 45 75
SB-BLUMND	1.01	150 225 058 5	1.00	50	0.75 0.802 0.75	15 45 75
EB-NRTHLND	1.01	000 1576 424 5	1.00	50	0.75 0.802 0.75	15 45 75

FLOW	veh	1333	1858	438	2005	
CAPACITY	veh	1847	2084	1109	2669	
AVE DELAY	secs	6.8	14.8	5.3	5.3	
MAX DELAY	secs	7.9	18.8	5.8	5.9	
AVE QUEUE	veh	3	8	1	3	
MAX QUEUE	veh	3	10	1	3	

AVEDEL s	8.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	13.8
COST $	207

15:1:09 YEAR 2035 NORTHLAND/BLUEMOUND-EB BYP* 105

E	(m)	12.00	12.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	7.31	7.31	7.31	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.03	110 158 146 5	1.00	85	0.75 1.276 0.75	15 45 75
WB-NRTHLND	1.01	060 1225 459 5	1.00	85	0.75 1.276 0.75	15 45 75
SB-BLUMND	1.01	192 250 157 5	1.00	85	0.75 1.276 0.75	15 45 75
EB-NRTHLND	1.01	000 1495 069 5	1.00	85	0.75 1.276 0.75	15 45 75

FLOW	veh	419	1749	604	1569	
CAPACITY	veh	1893	2595	996	2236	
AVE DELAY	secs	2.5	4.7	14.1	6.6	
MAX DELAY	secs	3.8	8.0	27.9	12.1	
AVE QUEUE	veh	0	2	2	3	
MAX QUEUE	veh	0	3	4	5	

AVEDEL s	6.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.9
COST $	118

15:1:09 YEAR 2035 NORTHLAND/BLUEMOUND-EB BYP* 106

E	(m)	12.00	12.00	8.00	12.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	10.97	7.31	7.31	7.31	
RAD	(m)	30.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	65.00	65.00	65.00	65.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-BLUMND	1.01	441 470 417 5	1.00	85	0.75 0.802 0.75	15 45 75
WB-NRTHLND	1.01	294 1270 289 5	1.00	85	0.75 0.802 0.75	15 45 75
SB-BLUMND	1.01	150 225 058 5	1.00	85	0.75 0.802 0.75	15 45 75
EB-NRTHLND	1.01	000 1576 424 5	1.00	85	0.75 0.802 0.75	15 45 75

FLOW	veh	1333	1858	438	2005	
CAPACITY	veh	1642	1879	919	2467	
AVE DELAY	secs	11.2	53.8	7.3	7.5	
MAX DELAY	secs	13.8	82.3	8.0	8.6	
AVE QUEUE	veh	4	31	1	4	
MAX QUEUE	veh	5	42	1	5	

AVEDEL	s 23.6
LOS SIG	C
LOS UNSIG	C
VEHIC HRS	37.0
COST	$ 555

15:1:09 NORTHLAND AVE / CONKEY ST - 2035 BYP* 76

E (m)	4.30	8.00	4.30	8.00
L' (m)	35.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	20.00	25.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.08	015 005 009 0	1.00	50	0.75 2.119 0.75	15 45 75
WB NORTHL	1.01	000 1522 161 0	1.00	50	0.75 2.119 0.75	15 45 75
SB CONKEY	1.23	017 000 022 0	1.00	50	0.75 2.119 0.75	15 45 75
EB NORTHL	1.02	036 499 089 0	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	29	1683	39	624
CAPACITY	veh	900	2331	339	2249
AVE DELAY	secs	4.1	10.8	20.9	2.2
MAX DELAY	secs	7.6	26.5	39.0	4.2
AVE QUEUE	veh	0	5	0	0
MAX QUEUE	veh	0	9	0	1

AVEDEL s	8.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.7
COST $	86

15:1:09 NORTHLAND AVE / CONKEY ST - 2035 BYP* 77

E (m)	4.30	8.00	4.30	8.00
L' (m)	35.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	20.00	25.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.01	199 013 018 0	1.00	50	0.75 0.891 0.75	15 45 75
WB NORTHL	1.01	000 626 041 0	1.00	50	0.75 0.891 0.75	15 45 75
SB CONKEY	1.02	070 000 169 0	1.00	50	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	045 1307 049 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	230	667	239	1401	
CAPACITY	veh	500	2349	917	2254	
AVE DELAY	secs	13.2	2.1	5.2	4.1	
MAX DELAY	secs	16.9	2.4	6.0	4.9	
AVE QUEUE	veh	1	0	0	2	
MAX QUEUE	veh	1	0	0	2	

AVEDEL s	4.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.2
COST $	48

15:1:09 NORTHLAND AVE / CONKEY ST - 2035 BYP* 78

E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	35.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.08	015 005 009 0	1.00	85	0.75 2.119 0.75	15 45 75
WB NORTHL	1.01	000 1522 161 0	1.00	85	0.75 2.119 0.75	15 45 75
SB CONKEY	1.23	017 000 022 0	1.00	85	0.75 2.119 0.75	15 45 75
EB NORTHL	1.02	036 499 089 0	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	29	1683	39	624	AVEDEL	s 31.7
CAPACITY	veh	708	2126	171	2046	LOS SIG	C
AVE DELAY	secs	5.3	31.2	39.0	2.5	LOS UNSIG	D
MAX DELAY	secs	9.9	85.7	39.0	4.8		
AVE QUEUE	veh	0	15	6	0	VEHIC HRS	20.9
MAX QUEUE	veh	0	33	17	1	COST	$ 314

15:1:09 NORTHLAND AVE / CONKEY ST - 2035 BYP* 79

E (m)	4.30	8.00	4.30	8.00
L' (m)	35.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	20.00	25.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.01	199 013 018 0	1.00	85	0.75 0.891 0.75	15 45 75
WB NORTHL	1.01	000 626 041 0	1.00	85	0.75 0.891 0.75	15 45 75
SB CONKEY	1.02	070 000 169 0	1.00	85	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	045 1307 049 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	230	667	239	1401	
CAPACITY	veh	295	2144	714	2049	
AVE DELAY	secs	59.8	2.4	7.4	5.5	
MAX DELAY	secs	99.3	2.7	8.6	6.7	
AVE QUEUE	veh	4	0	1	2	
MAX QUEUE	veh	7	0	1	2	

AVEDEL s	9.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.9
COST $	103

15:1:09 NORTHLAND AVE / CONKEY ST - 2035 WB SEMI* 74

E	(m)	4.30	4.30	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.08	000 005 000 0	1.00	50	0.75 2.119 0.75	15 45 75
WB NORTHL	1.01	306 0000 000 0	1.00	50	0.75 2.119 0.75	15 45 75
SB CONKEY	1.23	000 000 000 5	1.00	50	0.75 2.119 0.75	15 45 75
EB NORTHL	1.02	000 000 089 0	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	5	306	5	89	
CAPACITY	veh	1147	1235	1047	2379	
AVE DELAY	secs	3.0	3.8	3.3	1.5	
MAX DELAY	secs	5.0	7.2	5.0	2.7	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL s	3.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.4
COST $	6

15:1:09 NORTHLAND AVE / CONKEY ST - 2035 WB SEMI* 75

E	(m)	4.30	4.30	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.01	000 013 000 0	1.00	50	0.75 0.891 0.75	15 45 75
WB NORTHL	1.01	132 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
SB CONKEY	1.02	000 000 000 5	1.00	50	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	000 0000 049 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	13	132	5	49	
CAPACITY	veh	1247	1253	1263	2403	
AVE DELAY	secs	2.9	3.2	2.8	1.5	
MAX DELAY	secs	3.2	3.5	3.1	1.7	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL	s 2.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.2
COST	$ 2

15:1:09 NORTHLAND AVE / CONKEY ST - 2035 WB SEMI* 77

E	(m)	4.30	4.30	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.08	000 005 000 0	1.00	85	0.75 2.119 0.75	15 45 75
WB NORTHL	1.01	306 0000 000 0	1.00	85	0.75 2.119 0.75	15 45 75
SB CONKEY	1.23	000 000 000 5	1.00	85	0.75 2.119 0.75	15 45 75
EB NORTHL	1.02	000 000 089 0	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	5	306	5	89		
CAPACITY	veh	955	1030	879	2176		
AVE DELAY	secs	3.7	5.0	4.0	1.7		
MAX DELAY	secs	5.0	9.5	5.0	2.9		
AVE QUEUE	veh	0	0	0	0		
MAX QUEUE	veh	0	1	0	0		

AVEDEL s	4.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.5
COST $	7

15:1:09 NORTHLAND AVE / CONKEY ST - 2035 WB SEMI* 78

E	(m)	4.30	4.30	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.01	000 013 000 0	1.00	85	0.75 0.891 0.75	15 45 75
WB NORTHL	1.01	132 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
SB CONKEY	1.02	000 000 000 5	1.00	85	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	000 0000 049 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	13	132	5	49	
CAPACITY	veh	1043	1048	1060	2198	
AVE DELAY	secs	3.4	3.9	3.4	1.7	
MAX DELAY	secs	3.8	4.3	3.7	1.8	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL s	3.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.2
COST $	3

15:1:09 NORTHLAND AVE / 441 SB RAMPS - 2035 BYP* 56

E	(m)	4.30	12.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	20.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.924 0.75	15 45 75
WB NORTHL	1.01	000 1737 527 0	1.00	50	0.75 0.924 0.75	15 45 75
SB 441 S	1.08	341 000 122 0	1.00	50	0.75 0.924 0.75	15 45 75
EB NORTHL	1.04	000 387 000 0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	0	2264	463	387	
CAPACITY	veh	1018	3102	798	1911	
AVE DELAY	secs	0.0	4.3	11.3	2.3	
MAX DELAY	secs	0.0	5.5	16.4	2.7	
AVE QUEUE	veh	0	3	1	0	
MAX QUEUE	veh	0	3	2	0	

AVEDEL s	5.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.4
COST $	66

15:1:09 NORTHLAND AVE / 441 SB RAMPS - 2035 BYP* 57

E (m)	4.30	12.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	20.00	25.00	25.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.830 0.75	15 45 75
WB NORTHL	1.02	000 730 541 0	1.00	50	0.75 0.830 0.75	15 45 75
SB 441 S	1.06	047 000 132 0	1.00	50	0.75 0.830 0.75	15 45 75
EB NORTHL	1.01	000 1097 000 0	1.00	50	0.75 0.830 0.75	15 45 75

FLOW	veh	0	1271	179	1097	
CAPACITY	veh	675	3072	1454	1949	
AVE DELAY	secs	0.0	2.0	2.8	4.2	
MAX DELAY	secs	0.0	2.1	3.0	4.6	
AVE QUEUE	veh	0	1	0	1	
MAX QUEUE	veh	0	1	0	1	

AVEDEL s	3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.1
COST $	32

15:1:09 NORTHLAND AVE / 441 SB RAMPS - 2035 BYP* 58

E (m)	4.30	12.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	20.00	25.00	25.00	30.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME
NB 441 S	1.01	000	000	000	0	1.00	85	0.75	0.924	0.75	15 45 75
WB NORTHL	1.01	000	1737	527	0	1.00	85	0.75	0.924	0.75	15 45 75
SB 441 S	1.08	341	000	122	0	1.00	85	0.75	0.924	0.75	15 45 75
EB NORTHL	1.04	000	387	000	0	1.00	85	0.75	0.924	0.75	15 45 75

FLOW	veh	0	2264	463	387
CAPACITY	veh	813	2897	607	1712
AVE DELAY	secs	0.0	5.7	34.0	2.7
MAX DELAY	secs	0.0	7.6	61.3	3.1
AVE QUEUE	veh	0	4	4	0
MAX QUEUE	veh	0	5	8	0

AVEDEL s	9.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	8.2
COST $	123

15:1:09 NORTHLAND AVE / 441 SB RAMPS - 2035 BYP* 59

E	(m)	4.30	12.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	20.00	25.00	25.00	30.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.830 0.75	15 45 75
WB NORTHL	1.02	000 730 541 0	1.00	85	0.75 0.830 0.75	15 45 75
SB 441 S	1.06	047 000 132 0	1.00	85	0.75 0.830 0.75	15 45 75
EB NORTHL	1.01	000 1097 000 0	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	0	1271	179	1097	
CAPACITY	veh	470	2869	1258	1744	
AVE DELAY	secs	0.0	2.2	3.3	5.5	
MAX DELAY	secs	0.0	2.4	3.6	6.2	
AVE QUEUE	veh	0	1	0	2	
MAX QUEUE	veh	0	1	0	2	

AVEDEL s	3.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.6
COST $	39

15:1:09 NORTHLAND AVE / 441 NB RAMPS - 2035 3LN* 57

E	(m)	8.00	12.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	30.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	382 000 887 0	1.00	50	0.75 0.891 0.75	15 45 75
WB NORTHL	1.02	158 1573 000 0	1.00	50	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB NORTHL	1.06	000 431 058 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	1269	1731	0	489	
CAPACITY	veh	2054	2329	73	2293	
AVE DELAY	secs	4.5	6.0	0.0	2.0	
MAX DELAY	secs	5.4	7.8	0.0	2.2	
AVE QUEUE	veh	2	3	0	0	
MAX QUEUE	veh	2	4	0	0	

AVEDEL s	4.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.7
COST $	71

15:1:09 NORTHLAND AVE / 441 NB RAMPS - 2035 3LN* 58

E	(m)	8.00	12.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	30.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.03	693 000 343 0	1.00	50	0.75 0.891 0.75	15 45 75
WB NORTHL	1.02	059 994 000 0	1.00	50	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	000 1044 157 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	1036	1053	0	1201	
CAPACITY	veh	1552	2684	618	2407	
AVE DELAY	secs	6.9	2.2	0.0	2.9	
MAX DELAY	secs	8.8	2.5	0.0	3.4	
AVE QUEUE	veh	2	1	0	1	
MAX QUEUE	veh	2	1	0	1	

AVEDEL s	3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.6
COST $	54

15:1:09 NORTHLAND AVE / 441 NB RAMPS - 2035 3LN* 59

E	(m)	8.00	12.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	30.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB 441 N	1.01	382	000	887	0	1.00	85	0.75	0.891	0.75	15	45	75
WB NORTHL	1.02	158	1573	000	0	1.00	85	0.75	0.891	0.75	15	45	75
SB 441 S	1.01	000	000	000	0	1.00	85	0.75	0.891	0.75	15	45	75
EB NORTHL	1.06	000	431	058	0	1.00	85	0.75	0.891	0.75	15	45	75

FLOW	veh	1269	1731	0	489	
CAPACITY	veh	1849	2126	4	2098	
AVE DELAY	secs	6.1	9.2	0.0	2.2	
MAX DELAY	secs	7.6	12.9	0.0	2.5	
AVE QUEUE	veh	2	5	0	0	
MAX QUEUE	veh	3	6	0	0	

AVEDEL	s 7.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.9
COST	$ 103

15:1:09 NORTHLAND AVE / 441 NB RAMPS - 2035 3LN* 60

E	(m)	8.00	12.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	3.65	7.31	
RAD	(m)	25.00	30.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.03	693 000 343 0	1.00	85	0.75 0.891 0.75	15 45 75
WB NORTHL	1.02	059 994 000 0	1.00	85	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	000 1044 157 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	1036	1053	0	1201	
CAPACITY	veh	1351	2481	413	2202	
AVE DELAY	secs	11.5	2.5	0.0	3.5	
MAX DELAY	secs	15.8	2.9	0.0	4.1	
AVE QUEUE	veh	3	1	0	1	
MAX QUEUE	veh	4	1	0	1	

AVEDEL s	5.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.2
COST $	78

15:1:09 NORTHLAND AVE / FRENCH RD - 2035 2 LN* 37

E (m)	8.00	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.02	077 073 022 0	1.00	50	0.75 1.793 0.75	15 45 75
WB NORTHL	1.01	180 1270 053 0	1.00	50	0.75 1.793 0.75	15 45 75
SB FRENCH	1.01	583 137 059 0	1.00	50	0.75 1.793 0.75	15 45 75
EB NORTHL	1.01	105 538 444 0	1.00	50	0.75 1.793 0.75	15 45 75

FLOW	veh	172	1503	779	1087	
CAPACITY	veh	1277	2018	1439	2227	
AVE DELAY	secs	3.3	16.1	8.2	3.4	
MAX DELAY	secs	6.0	38.8	18.2	6.3	
AVE QUEUE	veh	0	7	2	1	
MAX QUEUE	veh	0	13	3	2	

AVEDEL s	9.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	9.7
COST $	145

15:1:09 NORTHLAND AVE / FRENCH RD - 2035 2 LN* 38

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME
NB FRENCH	1.01	052	059	043	0	1.00	50	0.75	0.891	0.75	15 45 75
WB NORTHL	1.02	097	712	051	0	1.00	50	0.75	0.891	0.75	15 45 75
SB FRENCH	1.01	584	047	060	0	1.00	50	0.75	0.891	0.75	15 45 75
EB NORTHL	1.01	044	1091	807	0	1.00	50	0.75	0.891	0.75	15 45 75

FLOW	veh	154	860	691	1942	
CAPACITY	veh	707	1735	1821	2292	
AVE DELAY	secs	6.4	4.0	3.1	10.2	
MAX DELAY	secs	7.9	4.8	3.6	14.0	
AVE QUEUE	veh	0	1	1	6	
MAX QUEUE	veh	0	1	1	7	

AVEDEL	s 7.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.3
COST	$ 110

15:1:09 NORTHLAND AVE / FRENCH RD - 2035 2 LN* 39

E (m)	8.00	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.02	077 073 022 0	1.00	85	0.75 1.793 0.75	15 45 75
WB NORTHL	1.01	180 1270 053 0	1.00	85	0.75 1.793 0.75	15 45 75
SB FRENCH	1.01	583 137 059 0	1.00	85	0.75 1.793 0.75	15 45 75
EB NORTHL	1.01	105 538 444 0	1.00	85	0.75 1.793 0.75	15 45 75

FLOW	veh	172	1503	779	1087	
CAPACITY	veh	1074	1813	1234	2022	
AVE DELAY	secs	4.2	59.9	14.0	4.3	
MAX DELAY	secs	7.6	156.2	33.1	8.2	
AVE QUEUE	veh	0	25	3	1	
MAX QUEUE	veh	0	62	6	2	

AVEDEL s	30.0
LOS SIG	C
LOS UNSIG	D
VEHIC HRS	29.5
COST $	443

15:1:09 NORTHLAND AVE / FRENCH RD - 2035 2 LN* 40

E (m)	8.00	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME
NB FRENCH	1.01	052	059	043	0	1.00	85	0.75	0.891	0.75	15 45 75
WB NORTHL	1.02	097	712	051	0	1.00	85	0.75	0.891	0.75	15 45 75
SB FRENCH	1.01	584	047	060	0	1.00	85	0.75	0.891	0.75	15 45 75
EB NORTHL	1.01	044	1091	807	0	1.00	85	0.75	0.891	0.75	15 45 75

FLOW	veh	154	860	691	1942
CAPACITY	veh	504	1534	1616	2087
AVE DELAY	secs	10.1	5.2	3.8	23.8
MAX DELAY	secs	13.0	6.3	4.5	39.2
AVE QUEUE	veh	0	1	1	13
MAX QUEUE	veh	1	1	1	21

AVEDEL	s 15.1
LOS SIG	B
LOS UNSIG	C
VEHIC HRS	15.3
COST	$ 229

13:1:09 NORTHLAND AVE / CONKEY ST - 2020 2 LANE* 35

E	(m)	4.30	8.00	4.30	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	3.65	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	25.00	20.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.08	015 005 008 0	1.00	50	0.75 2.119 0.75	15 45 75
WB NORTHL	1.01	301 1278 148 0	1.00	50	0.75 2.119 0.75	15 45 75
SB CONKEY	1.23	009 000 018 0	1.00	50	0.75 2.119 0.75	15 45 75
EB NORTHL	1.02	033 475 070 0	1.00	50	0.75 2.119 0.75	15 45 75

FLOW	veh	28	1727	27	578	AVEDEL	s 9.9
CAPACITY	veh	908	2343	422	2257	LOS SIG	A
AVE DELAY	secs	4.1	12.6	11.5	2.1	LOS UNSIG	A
MAX DELAY	secs	7.5	31.4	25.2	4.0		
AVE QUEUE	veh	0	6	0	0	VEHIC HRS	6.5
MAX QUEUE	veh	0	12	0	0	COST	$ 97

13:1:09 NORTHLAND AVE / CONKEY ST - 2020 2 LANE* 36

E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.01	181 012 016 0	1.00	50	0.75 0.891 0.75	15 45 75
WB NORTHL	1.01	117 508 016 0	1.00	50	0.75 0.891 0.75	15 45 75
SB CONKEY	1.02	062 000 150 0	1.00	50	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	040 1126 043 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	209	641	212	1209
CAPACITY	veh	574	2353	979	2281
AVE DELAY	secs	9.7	2.1	4.6	3.3
MAX DELAY	secs	11.9	2.3	5.2	3.8
AVE QUEUE	veh	1	0	0	1
MAX QUEUE	veh	1	0	0	1

AVEDEL	s 3.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.3
COST	$ 35

13:1:09 NORTHLAND AVE / CONKEY ST - 2020 2 LANE* 37

E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.08	015 005 008 0	1.00	85	0.75 2.119 0.75	15 45 75
WB NORTHL	1.01	301 1278 148 0	1.00	85	0.75 2.119 0.75	15 45 75
SB CONKEY	1.23	009 000 018 0	1.00	85	0.75 2.119 0.75	15 45 75
EB NORTHL	1.02	033 475 070 0	1.00	85	0.75 2.119 0.75	15 45 75

FLOW	veh	28	1727	27	578	
CAPACITY	veh	717	2138	254	2054	
AVE DELAY	secs	5.2	39.8	26.5	2.5	
MAX DELAY	secs	9.8	110.7	27.0	4.6	
AVE QUEUE	veh	0	19	0	0	
MAX QUEUE	veh	0	45	0	1	

AVEDEL	s 30.1
LOS SIG	C
LOS UNSIG	D
VEHIC HRS	19.7
COST	$ 296

13:1:09 NORTHLAND AVE / CONKEY ST - 2020 2 LANE* 38

E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	20.00	25.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB CONKEY	1.01	181 012 016 0	1.00	85	0.75 0.891 0.75	15 45 75
WB NORTHL	1.01	117 508 016 0	1.00	85	0.75 0.891 0.75	15 45 75
SB CONKEY	1.02	062 000 150 0	1.00	85	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	040 1126 043 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	209	641	212	1209
CAPACITY	veh	370	2148	776	2076
AVE DELAY	secs	22.4	2.4	6.3	4.1
MAX DELAY	secs	30.5	2.6	7.2	4.8
AVE QUEUE	veh	1	0	0	1
MAX QUEUE	veh	2	0	0	2

AVEDEL s	5.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.5
COST $	52

13:1:09 NORTHLAND AVE / 441 SB RAMPS - 2020 2LN* 27

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	20.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.924 0.75	15 45 75
WB NORTHL	1.01	000 1517 433 0	1.00	50	0.75 0.924 0.75	15 45 75
SB 441 S	1.08	303 000 108 0	1.00	50	0.75 0.924 0.75	15 45 75
EB NORTHL	1.04	332 257 000 0	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	0	1950	411	589	
CAPACITY	veh	1073	2407	884	1938	
AVE DELAY	secs	0.0	7.9	7.7	2.6	
MAX DELAY	secs	0.0	10.8	10.3	3.1	
AVE QUEUE	veh	0	4	1	0	
MAX QUEUE	veh	0	6	1	0	

AVEDEL	s 6.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.6
COST	$ 84

13:1:09 NORTHLAND AVE / 441 SB RAMPS - 2020 2LN* 28

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	20.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.830 0.75	15 45 75
WB NORTHL	1.02	000 594 435 0	1.00	50	0.75 0.830 0.75	15 45 75
SB 441 S	1.06	043 000 117 0	1.00	50	0.75 0.830 0.75	15 45 75
EB NORTHL	1.01	718 824 000 0	1.00	50	0.75 0.830 0.75	15 45 75

FLOW	veh	0	1029	160	1542
CAPACITY	veh	773	2383	1551	1985
AVE DELAY	secs	0.0	2.6	2.6	7.9
MAX DELAY	secs	0.0	2.8	2.8	9.4
AVE QUEUE	veh	0	1	0	3
MAX QUEUE	veh	0	1	0	4

AVEDEL s	5.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.2
COST $	64

13:1:09 NORTHLAND AVE / 441 SB RAMPS - 2020 2LN* 29

E	(m)	4.30	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.924 0.75	15 45 75
WB NORTHL	1.01	000 1517 433 0	1.00	85	0.75 0.924 0.75	15 45 75
SB 441 S	1.08	303 000 108 0	1.00	85	0.75 0.924 0.75	15 45 75
EB NORTHL	1.04	332 257 000 0	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	0	1950	411	589	AVEDEL	s 12.1
CAPACITY	veh	868	2202	694	1739	LOS SIG	B
AVE DELAY	secs	0.0	14.6	13.3	3.1	LOS UNSIG	B
MAX DELAY	secs	0.0	22.6	19.8	3.6		
AVE QUEUE	veh	0	8	2	1	VEHIC HRS	9.9
MAX QUEUE	veh	0	12	2	1	COST	$ 149

13:1:09 NORTHLAND AVE / 441 SB RAMPS - 2020 2LN* 30

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	20.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.830 0.75	15 45 75
WB NORTHL	1.02	000 594 435 0	1.00	85	0.75 0.830 0.75	15 45 75
SB 441 S	1.06	043 000 117 0	1.00	85	0.75 0.830 0.75	15 45 75
EB NORTHL	1.01	718 824 000 0	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	0	1029	160	1542
CAPACITY	veh	568	2180	1356	1780
AVE DELAY	secs	0.0	3.1	3.0	14.3
MAX DELAY	secs	0.0	3.4	3.2	18.4
AVE QUEUE	veh	0	1	0	6
MAX QUEUE	veh	0	1	0	8

AVEDEL	s 9.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.1
COST	$ 107

13:1:09 NORTHLAND AVE / 441 NB RAMPS - 2020 2LN* 40

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	395 000 787 0	1.00	50	0.75 0.891 0.75	15 45 75
WB NORTHL	1.02	154 1223 000 0	1.00	50	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB NORTHL	1.06	000 335 052 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	1182	1377	0	387	
CAPACITY	veh	1683	1758	203	2271	
AVE DELAY	secs	7.0	9.4	0.0	1.9	
MAX DELAY	secs	8.8	12.7	0.0	2.1	
AVE QUEUE	veh	2	4	0	0	
MAX QUEUE	veh	3	5	0	0	

AVEDEL	s 7.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.1
COST	$ 92

13:1:09 NORTHLAND AVE / 441 NB RAMPS - 2020 2LN* 41

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.03	615 000 305 0	1.00	50	0.75 0.891 0.75	15 45 75
WB NORTHL	1.02	052 879 000 0	1.00	50	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	000 806 074 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	920	931	0	880	
CAPACITY	veh	1342	2097	639	2383	
AVE DELAY	secs	8.4	3.0	0.0	2.4	
MAX DELAY	secs	10.7	3.5	0.0	2.7	
AVE QUEUE	veh	2	1	0	1	
MAX QUEUE	veh	3	1	0	1	

AVEDEL	s 4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.5
COST	$ 53

13:1:09 NORTHLAND AVE / 441 NB RAMPS - 2020 2LN* 42

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.01	395 000 787 0	1.00	85	0.75 0.891 0.75	15 45 75
WB NORTHL	1.02	154 1223 000 0	1.00	85	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
EB NORTHL	1.06	000 335 052 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	1182	1377	0	387	
CAPACITY	veh	1478	1556	21	2076	
AVE DELAY	secs	11.9	20.5	0.0	2.1	
MAX DELAY	secs	15.9	32.5	0.0	2.3	
AVE QUEUE	veh	4	8	0	0	
MAX QUEUE	veh	5	12	0	0	

AVEDEL	s 14.6
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	12.0
COST	$ 180

13:1:09 NORTHLAND AVE / 441 NB RAMPS - 2020 2LN* 43

E	(m)	8.00	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 441 N	1.03	615 000 305 0	1.00	85	0.75 0.891 0.75	15 45 75
WB NORTHL	1.02	052 879 000 0	1.00	85	0.75 0.891 0.75	15 45 75
SB 441 S	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	000 806 074 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	920	931	0	880
CAPACITY	veh	1141	1894	434	2178
AVE DELAY	secs	16.2	3.7	0.0	2.7
MAX DELAY	secs	22.8	4.3	0.0	3.1
AVE QUEUE	veh	4	1	0	1
MAX QUEUE	veh	6	1	0	1

AVEDEL	s 7.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.8
COST	$ 86

13:1:09 NORTHLAND AVE / FRENCH RD - 2020 2 LN* 31

E	(m)	4.30	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	3.65	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.02	030 042 021 0	1.00	50	0.75 1.793 0.75	15 45 75
WB NORTHL	1.01	155 994 051 0	1.00	50	0.75 1.793 0.75	15 45 75
SB FRENCH	1.01	461 153 049 0	1.00	50	0.75 1.793 0.75	15 45 75
EB NORTHL	1.01	066 423 343 0	1.00	50	0.75 1.793 0.75	15 45 75

FLOW	veh	93	1200	663	832	AVEDEL s	5.0
CAPACITY	veh	834	2102	1246	2217	LOS SIG	A
AVE DELAY	secs	4.9	4.7	8.6	2.7	LOS UNSIG	A
MAX DELAY	secs	8.8	9.4	18.4	4.7		
AVE QUEUE	veh	0	2	2	1	VEHIC HRS	3.9
MAX QUEUE	veh	0	2	3	1	COST $	59

13:1:09 NORTHLAND AVE / FRENCH RD - 2020 2 LN* 32

E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	20.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.01	024 043 039 0	1.00	50	0.75 0.891 0.75	15 45 75
WB NORTHL	1.02	071 521 032 0	1.00	50	0.75 0.891 0.75	15 45 75
SB FRENCH	1.01	331 021 030 0	1.00	50	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	041 944 642 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	106	624	382	1627
CAPACITY	veh	418	1846	1556	2344
AVE DELAY	secs	11.4	2.9	3.0	4.9
MAX DELAY	secs	14.3	3.3	3.4	6.0
AVE QUEUE	veh	0	1	0	2
MAX QUEUE	veh	0	1	0	3

AVEDEL s	4.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.4
COST $	51

13:1:09 NORTHLAND AVE / FRENCH RD - 2020 2 LN* 33

E	(m)	4.30	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	3.65	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.02	030 042 021 0	1.00	85	0.75 1.793 0.75	15 45 75
WB NORTHL	1.01	155 994 051 0	1.00	85	0.75 1.793 0.75	15 45 75
SB FRENCH	1.01	461 153 049 0	1.00	85	0.75 1.793 0.75	15 45 75
EB NORTHL	1.01	066 423 343 0	1.00	80	0.75 1.793 0.75	15 45 75

FLOW	veh	93	1200	663	832	AVEDEL s	9.2
CAPACITY	veh	632	1897	1041	2050	LOS SIG	A
AVE DELAY	secs	7.0	6.8	21.5	3.0	LOS UNSIG	A
MAX DELAY	secs	12.8	14.3	51.2	5.5		
AVE QUEUE	veh	0	2	4	1	VEHIC HRS	7.1
MAX QUEUE	veh	0	4	8	1	COST $	107

13:1:09 NORTHLAND AVE / FRENCH RD - 2020 2 LN* 34

E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	20.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.01	024 043 039 0	1.00	85	0.75 0.891 0.75	15 45 75
WB NORTHL	1.02	071 521 032 0	1.00	85	0.75 0.891 0.75	15 45 75
SB FRENCH	1.01	331 021 030 0	1.00	85	0.75 0.891 0.75	15 45 75
EB NORTHL	1.01	041 944 642 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	106	624	382	1627
CAPACITY	veh	213	1643	1351	2139
AVE DELAY	secs	35.9	3.5	3.7	6.9
MAX DELAY	secs	53.6	4.0	4.2	8.7
AVE QUEUE	veh	1	1	0	3
MAX QUEUE	veh	2	1	0	4

AVEDEL	s 6.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.2
COST	$ 77

13:1:09 YEAR 2020 OAKRIDGE/SB 41 RAMP-1 LANE* 21

E	(m)	4.30	4.30	4.30			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	3.65	3.65			
RAD	(m)	20.00	20.00	20.00			
PHI	(d)	30.00	30.00	30.00			
DIA	(m)	40.00	40.00	40.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41OFF	1.01	301 044 0	1.00	50	0.75 2.389 0.75	15 45 75
WB-OAKRDGE	1.02	219 000 5	1.00	50	0.75 2.389 0.75	15 45 75
EB-OAKRDGE	1.02	000 359 5	1.00	50	0.75 2.389 0.75	15 45 75

FLOW	veh	345	224	364			
CAPACITY	veh	1066	1235	1260			
AVE DELAY	secs	5.3	3.5	4.0			
MAX DELAY	secs	11.2	6.8	8.0			
AVE QUEUE	veh	1	0	0			
MAX QUEUE	veh	1	0	1			

AVEDEL s	4.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST $	17

13:1:09 YEAR 2020 OAKRIDGE/SB 41 RAMP-1 LANE* 22

E	(m)	4.30	4.30	4.30			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	3.65	3.65			
RAD	(m)	20.00	20.00	20.00			
PHI	(d)	30.00	30.00	30.00			
DIA	(m)	40.00	40.00	40.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41OFF	1.01	297 085 0	1.00	50	0.75 1.701 0.75	15 45 75
WB-OAKRDGE	1.01	239 000 5	1.00	50	0.75 1.701 0.75	15 45 75
EB-OAKRDGE	1.01	000 248 5	1.00	50	0.75 1.701 0.75	15 45 75

FLOW	veh	382	244	253
CAPACITY	veh	1131	1225	1272
AVE DELAY	secs	4.8	3.6	3.5
MAX DELAY	secs	8.4	5.9	5.6
AVE QUEUE	veh	1	0	0
MAX QUEUE	veh	1	0	0

AVEDEL	s 4.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.0
COST	$ 15

13:1:09 YEAR 2020 OAKRIDGE/SB 41 RAMP-1 LANE* 23

E	(m)	4.30	4.30	4.30			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	3.65	3.65			
RAD	(m)	20.00	20.00	20.00			
PHI	(d)	30.00	30.00	30.00			
DIA	(m)	40.00	40.00	40.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41OFF	1.01	301 044 0	1.00	85	0.75 2.389 0.75	15 45 75
WB-OAKRDGE	1.02	219 000 5	1.00	85	0.75 2.389 0.75	15 45 75
EB-OAKRDGE	1.02	000 359 5	1.00	85	0.75 2.389 0.75	15 45 75

FLOW	veh	345	224	364			
CAPACITY	veh	862	1032	1057			
AVE DELAY	secs	7.9	4.4	5.3			
MAX DELAY	secs	17.4	8.6	10.8			
AVE QUEUE	veh	1	0	1			
MAX QUEUE	veh	1	0	1			

AVEDEL s	6.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.6
COST $	24

13:1:09 YEAR 2020 OAKRIDGE/SB 41 RAMP-1 LANE* 24

E	(m)	4.30	4.30	4.30			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	3.65	3.65			
RAD	(m)	20.00	20.00	20.00			
PHI	(d)	30.00	30.00	30.00			
DIA	(m)	40.00	40.00	40.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41OFF	1.01	297 085 0	1.00	85	0.75 1.701 0.75	15 45 75
WB-OAKRDGE	1.01	239 000 5	1.00	85	0.75 1.701 0.75	15 45 75
EB-OAKRDGE	1.01	000 248 5	1.00	85	0.75 1.701 0.75	15 45 75

FLOW	veh	382	244	253			
CAPACITY	veh	926	1020	1067			
AVE DELAY	secs	6.8	4.6	4.3			
MAX DELAY	secs	12.2	7.5	7.1			
AVE QUEUE	veh	1	0	0			
MAX QUEUE	veh	1	0	0			

AVEDEL s	5.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	20

13:1:09 YEAR 2020 OAKRIDGE/NB 41 RAMP-2 LN GEOM* 18

E	(m)	4.30	8.00	8.00			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	7.31	3.65			
RAD	(m)	20.00	25.00	25.00			
PHI	(d)	30.00	30.00	30.00			
DIA	(m)	50.00	50.00	50.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.02	159 022 0	1.00	50	0.75 1.078 0.75	15 45 75
WB-OAKRDGE	1.02	234 000 5	1.00	50	0.75 1.078 0.75	15 45 75
EB-OAKRDGE	1.02	000 610 5	1.00	50	0.75 1.078 0.75	15 45 75

FLOW	veh	181	239	615
CAPACITY	veh	934	2363	1930
AVE DELAY	secs	4.7	1.7	2.7
MAX DELAY	secs	6.1	2.1	3.4
AVE QUEUE	veh	0	0	0
MAX QUEUE	veh	0	0	1

AVEDEL s	2.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST $	12

13:1:09 YEAR 2020 OAKRIDGE/NB 41 RAMP-2 LN GEOM* 19

E	(m)	4.30	8.00	8.00			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	7.31	3.65			
RAD	(m)	20.00	25.00	25.00			
PHI	(d)	30.00	30.00	30.00			
DIA	(m)	50.00	50.00	50.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	103 017 0	1.00	50	0.75 0.959 0.75	15 45 75
WB-OAKRDGE	1.01	211 000 5	1.00	50	0.75 0.959 0.75	15 45 75
EB-OAKRDGE	1.01	000 475 5	1.00	50	0.75 0.959 0.75	15 45 75

FLOW	veh	120	216	480			
CAPACITY	veh	998	2390	1949			
AVE DELAY	secs	4.0	1.6	2.4			
MAX DELAY	secs	4.7	1.9	2.8			
AVE QUEUE	veh	0	0	0			
MAX QUEUE	veh	0	0	0			

AVEDEL s	2.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.6
COST $	8

13:1:09 YEAR 2020 OAKRIDGE/NB 41 RAMP-2 LN GEOM* 20

E	(m)	4.30	8.00	8.00			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	7.31	3.65			
RAD	(m)	20.00	25.00	25.00			
PHI	(d)	30.00	30.00	30.00			
DIA	(m)	50.00	50.00	50.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.02	159 022 0	1.00	85	0.75 1.078 0.75	15 45 75
WB-OAKRDGE	1.02	234 000 5	1.00	85	0.75 1.078 0.75	15 45 75
EB-OAKRDGE	1.02	000 610 5	1.00	85	0.75 1.078 0.75	15 45 75

FLOW	veh	181	239	615	AVEDEL	s	3.4
CAPACITY	veh	731	2160	1727	LOS SIG		A
AVE DELAY	secs	6.4	1.8	3.2	LOS UNSIG		A
MAX DELAY	secs	8.5	2.3	4.1			
AVE QUEUE	veh	0	0	1	VEHIC HRS		1.0
MAX QUEUE	veh	0	0	1	COST	$	15

13:1:09 YEAR 2020 OAKRIDGE/NB 41 RAMP-2 LN GEOM* 21

E	(m)	4.30	8.00	8.00			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	7.31	3.65			
RAD	(m)	20.00	25.00	25.00			
PHI	(d)	30.00	30.00	30.00			
DIA	(m)	50.00	50.00	50.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	103 017 0	1.00	85	0.75 0.959 0.75	15 45 75
WB-OAKRDGE	1.01	211 000 5	1.00	85	0.75 0.959 0.75	15 45 75
EB-OAKRDGE	1.01	000 475 5	1.00	85	0.75 0.959 0.75	15 45 75

FLOW	veh	120	216	480			
CAPACITY	veh	797	2185	1744			
AVE DELAY	secs	5.2	1.8	2.8			
MAX DELAY	secs	6.2	2.1	3.3			
AVE QUEUE	veh	0	0	0			
MAX QUEUE	veh	0	0	0			

AVEDEL	s 2.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.7
COST	$ 10

13:1:09 YEAR 2020 OAKRIDGE/GREEN BAY-ALL 2 LANE* 27

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD min	90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE min	15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD min	15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST $/hr	15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD min	15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE pcu/veh	VEH
GRAD SEP		0	0	0	0	FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.03	014 149 071 5	1.00	50	0.75 1.892 0.75	15 45 75
WB-OAKRDGE	1.02	370 141 028 5	1.00	50	0.75 1.892 0.75	15 45 75
SB-GRN BAY	1.01	029 226 194 5	1.00	50	0.75 1.892 0.75	15 45 75
EB-OAKRDGE	1.02	104 279 090 5	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	239	544	454	478	AVEDEL s	2.2
CAPACITY	veh	1932	2138	2213	2039	LOS SIG	A
AVE DELAY	secs	2.1	2.3	2.0	2.3	LOS UNSIG	A
MAX DELAY	secs	3.7	4.0	3.5	4.1		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	1.0
MAX QUEUE	veh	0	0	0	0	COST $	16

13:1:09 YEAR 2020 OAKRIDGE/GREEN BAY-ALL 2 LANE* 28

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	044 146 033 5	1.00	50	0.75 1.335 0.75	15 45 75
WB-OAKRDGE	1.03	246 153 044 5	1.00	50	0.75 1.335 0.75	15 45 75
SB-GRN BAY	1.01	040 93 168 5	1.00	50	0.75 1.335 0.75	15 45 75
EB-OAKRDGE	1.01	000 192 112 5	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	228	448	306	309	
CAPACITY	veh	2041	2135	2220	2166	
AVE DELAY	secs	1.9	2.1	1.8	1.9	
MAX DELAY	secs	2.8	3.0	2.6	2.7	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL s	2.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.7
COST $	11

13:1:09 YEAR 2020 OAKRIDGE/GREEN BAY-ALL 2 LANE* 29

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.03	014 149 071 5	1.00	85	0.75 1.892 0.75	15 45 75
WB-OAKRDGE	1.02	370 141 028 5	1.00	85	0.75 1.892 0.75	15 45 75
SB-GRN BAY	1.01	029 226 194 5	1.00	85	0.75 1.892 0.75	15 45 75
EB-OAKRDGE	1.02	104 279 090 5	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	239	544	454	478
CAPACITY	veh	1731	1935	2008	1836
AVE DELAY	secs	2.4	2.6	2.3	2.7
MAX DELAY	secs	4.2	4.7	4.0	4.9
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	1	0	0

AVEDEL	s 2.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.2
COST	$ 18

13:1:09 YEAR 2020 OAKRIDGE/GREEN BAY-ALL 2 LANE* 30

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD min	90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE min	15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD min	15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST $/hr	15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD min	15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE pcu/veh	VEH
GRAD SEP		0	0	0	0	FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	044 146 033 5	1.00	85	0.75 1.335 0.75	15 45 75
WB-OAKRDGE	1.03	246 153 044 5	1.00	85	0.75 1.335 0.75	15 45 75
SB-GRN BAY	1.01	040 93 168 5	1.00	85	0.75 1.335 0.75	15 45 75
EB-OAKRDGE	1.01	000 192 112 5	1.00	85	0.75 1.335 0.75	15 45 75

FLOW	veh	228	448	306	309	AVEDEL s	2.2
CAPACITY	veh	1836	1934	2015	1961	LOS SIG	A
AVE DELAY	secs	2.2	2.4	2.1	2.1	LOS UNSIG	A
MAX DELAY	secs	3.1	3.4	2.9	3.0		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.8
MAX QUEUE	veh	0	0	0	0	COST $	12

15:1:09 YEAR 2035 OAKRIDGE/SB 41 RAMP-1 LANE* 20

E (m)	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00
V (m)	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-SB41OFF	1.01	340 094 0	1.00	50	0.75 2.389 0.75	15 45 75
WB-OAKRDGE	1.02	291 000 5	1.00	50	0.75 2.389 0.75	15 45 75
EB-OAKRDGE	1.02	000 625 5	1.00	50	0.75 2.389 0.75	15 45 75

FLOW	veh	434	296	630
CAPACITY	veh	916	1208	1260
AVE DELAY	secs	10.1	4.0	6.4
MAX DELAY	secs	23.7	7.8	13.9
AVE QUEUE	veh	1	0	1
MAX QUEUE	veh	2	0	2

AVEDEL s	7.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.7
COST $	40

15:1:09 YEAR 2035 OAKRIDGE/SB 41 RAMP-1 LANE* 21

E (m)	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00
V (m)	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-SB41OFF	1.01	334 095 0	1.00	50	0.75 1.701 0.75	15 45 75
WB-OAKRDGE	1.01	316 000 5	1.00	50	0.75 1.701 0.75	15 45 75
EB-OAKRDGE	1.01	000 294 5	1.00	50	0.75 1.701 0.75	15 45 75

FLOW veh	429	321	299
CAPACITY veh	1105	1219	1272
AVE DELAY secs	5.4	4.0	3.6
MAX DELAY secs	9.6	6.6	5.9
AVE QUEUE veh	1	0	0
MAX QUEUE veh	1	0	0

AVEDEL s	4.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	20

15:1:09 YEAR 2035 OAKRIDGE/SB 41 RAMP-1 LANE* 22

E (m)	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00
V (m)	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00
GRAD SEP	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-SB41OFF	1.01	340 094 0	1.00	85	0.75 2.389 0.75	15 45 75
WB-OAKRDGE	1.02	291 000 5	1.00	85	0.75 2.389 0.75	15 45 75
EB-OAKRDGE	1.02	000 625 5	1.00	85	0.75 2.389 0.75	15 45 75

FLOW	veh	434	296	630
CAPACITY	veh	711	1005	1057
AVE DELAY	secs	31.2	5.2	10.7
MAX DELAY	secs	81.2	10.4	24.5
AVE QUEUE	veh	4	0	2
MAX QUEUE	veh	8	1	3

AVEDEL	s 16.0
LOS SIG	B
LOS UNSIG	C
VEHIC HRS	6.1
COST	$ 91

15:1:09 YEAR 2035 OAKRIDGE/SB 41 RAMP-1 LANE* 23

E (m)	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00
V (m)	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			CAPF	CL	FLOW RATIO	FLOW TIME
NB-SB41OFF	1.01	334	095	0	1.00	85	0.75 1.701 0.75	15 45 75
WB-OAKRDGE	1.01	316	000	5	1.00	85	0.75 1.701 0.75	15 45 75
EB-OAKRDGE	1.01	000	294	5	1.00	85	0.75 1.701 0.75	15 45 75

FLOW	veh	429	321	299
CAPACITY	veh	900	1014	1067
AVE DELAY	secs	8.2	5.2	4.6
MAX DELAY	secs	15.1	8.7	7.6
AVE QUEUE	veh	1	0	0
MAX QUEUE	veh	1	1	1

AVEDEL s	6.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST $	27

15:1:09 YEAR 2035 OAKRIDGE/NB 41 RAMP-2 LANE* 25

E (m)	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00
V (m)	3.65	7.31	3.65
RAD (m)	20.00	25.00	25.00
PHI (d)	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.02	179 025 0	1.00	50	0.75 1.078 0.75	15 45 75
WB-OAKRDGE	1.02	418 000 5	1.00	50	0.75 1.078 0.75	15 45 75
EB-OAKRDGE	1.02	000 687 5	1.00	50	0.75 1.078 0.75	15 45 75

FLOW	veh	204	423	692
CAPACITY	veh	893	2360	1930
AVE DELAY	secs	5.1	1.8	2.9
MAX DELAY	secs	6.7	2.3	3.7
AVE QUEUE	veh	0	0	1
MAX QUEUE	veh	0	0	1

AVEDEL s	2.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST $	16

15:1:09 YEAR 2035 OAKRIDGE/NB 41 RAMP-2 LANE* 26

E (m)	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00
V (m)	3.65	7.31	3.65
RAD (m)	20.00	25.00	25.00
PHI (d)	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	117 019 0	1.00	50	0.75 0.959 0.75	15 45 75
WB-OAKRDGE	1.01	277 000 5	1.00	50	0.75 0.959 0.75	15 45 75
EB-OAKRDGE	1.01	000 535 5	1.00	50	0.75 0.959 0.75	15 45 75

FLOW	veh	136	282	540
CAPACITY	veh	967	2388	1949
AVE DELAY	secs	4.3	1.7	2.5
MAX DELAY	secs	5.0	1.9	3.0
AVE QUEUE	veh	0	0	0
MAX QUEUE	veh	0	0	0

AVEDEL s	2.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.7
COST $	10

15:1:09 YEAR 2035 OAKRIDGE/NB 41 RAMP-2 LANE* 27

E (m)	4.30	8.00	8.00
L' (m)	25.00	25.00	25.00
V (m)	3.65	7.31	3.65
RAD (m)	20.00	25.00	25.00
PHI (d)	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			CAPF	CL	FLOW RATIO			FLOW TIME
NB-NB41OFF	1.02	179	025	0	1.00	85	0.75	1.078	0.75	15 45 75
WB-OAKRDGE	1.02	418	000	5	1.00	85	0.75	1.078	0.75	15 45 75
EB-OAKRDGE	1.02	000	687	5	1.00	85	0.75	1.078	0.75	15 45 75

FLOW	veh	204	423	692
CAPACITY	veh	690	2157	1727
AVE DELAY	secs	7.3	2.0	3.4
MAX DELAY	secs	9.8	2.5	4.4
AVE QUEUE	veh	0	0	1
MAX QUEUE	veh	1	0	1

AVEDEL s	3.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	20

E	(m)	4.30	8.00	8.00	
L'	(m)	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	
RAD	(m)	20.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	
GRAD SEP		0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	117 019 0	1.00	85	0.75 0.959 0.75	15 45 75
WB-OAKRDGE	1.01	277 000 5	1.00	85	0.75 0.959 0.75	15 45 75
EB-OAKRDGE	1.01	000 535 5	1.00	85	0.75 0.959 0.75	15 45 75

FLOW	veh	136	282	540	
CAPACITY	veh	766	2183	1744	
AVE DELAY	secs	5.6	1.9	2.9	
MAX DELAY	secs	6.7	2.2	3.5	
AVE QUEUE	veh	0	0	0	
MAX QUEUE	veh	0	0	0	

AVEDEL	s 3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST	$ 12

15:1:09 YEAR 2035 OAKRIDGE/GREEN BAY-2 LANE* 39

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.03	016 164 099 5	1.00	50	0.75 1.892 0.75	15 45 75
WB-OAKRDGE	1.02	578 261 031 5	1.00	50	0.75 1.892 0.75	15 45 75
SB-GRN BAY	1.01	073 438 371 5	1.00	50	0.75 1.892 0.75	15 45 75
EB-OAKRDGE	1.02	117 641 092 5	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	284	875	887	855	
CAPACITY	veh	1532	2104	2098	1748	
AVE DELAY	secs	3.0	3.1	3.2	4.9	
MAX DELAY	secs	5.7	5.9	6.0	10.1	
AVE QUEUE	veh	0	1	1	1	
MAX QUEUE	veh	0	1	1	2	

AVEDEL s	3.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.9
COST $	44

15:1:09 YEAR 2035 OAKRIDGE/GREEN BAY-2 LANE* 40

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	049 216 037 5	1.00	50	0.75 1.335 0.75	15 45 75
WB-OAKRDGE	1.03	416 213 050 5	1.00	50	0.75 1.335 0.75	15 45 75
SB-GRN BAY	1.01	045 356 178 5	1.00	50	0.75 1.335 0.75	15 45 75
EB-OAKRDGE	1.01	174 433 178 5	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	307	684	584	790	
CAPACITY	veh	1804	2032	2166	1957	
AVE DELAY	secs	2.4	2.7	2.2	3.1	
MAX DELAY	secs	3.5	4.0	3.3	4.8	
AVE QUEUE	veh	0	1	0	1	
MAX QUEUE	veh	0	1	0	1	

AVEDEL s	2.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST $	26

15:1:09 YEAR 2035 OAKRIDGE/GREEN BAY-2 LANE* 43

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.03	016 164 099 5	1.00	85	0.75 1.892 0.75	15 45 75
WB-OAKRDGE	1.02	578 261 031 5	1.00	85	0.75 1.892 0.75	15 45 75
SB-GRN BAY	1.01	073 438 371 5	1.00	85	0.75 1.892 0.75	15 45 75
EB-OAKRDGE	1.02	117 641 092 5	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	284	875	887	855	
CAPACITY	veh	1331	1901	1894	1545	
AVE DELAY	secs	3.7	3.8	3.9	7.2	
MAX DELAY	secs	7.1	7.4	7.7	15.7	
AVE QUEUE	veh	0	1	1	2	
MAX QUEUE	veh	0	1	1	3	

AVEDEL s	4.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.9
COST $	59

15:1:09 YEAR 2035 OAKRIDGE/GREEN BAY-2 LANE* 44

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	CAPF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	049 216 037 5	1.00	85	0.75 1.335 0.75	15 45 75
WB-OAKRDGE	1.03	416 213 050 5	1.00	85	0.75 1.335 0.75	15 45 75
SB-GRN BAY	1.01	045 356 178 5	1.00	85	0.75 1.335 0.75	15 45 75
EB-OAKRDGE	1.01	174 433 178 5	1.00	85	0.75 1.335 0.75	15 45 75

FLOW	veh	307	684	584	790	
CAPACITY	veh	1599	1831	1961	1752	
AVE DELAY	secs	2.8	3.1	2.6	3.8	
MAX DELAY	secs	4.1	4.8	3.8	6.1	
AVE QUEUE	veh	0	1	0	1	
MAX QUEUE	veh	0	1	1	1	

AVEDEL s	3.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.1
COST $	31

15:1:09 YEAR 2020 WINNECONNE/WESTOWNE-2 LANE* 66

E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	20.00	25.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-WESTWNE	1.01	089 009 008 5	1.00	50	0.75 1.036 0.75	15 45 75
WB-WINECNE	1.02	133 467 082 5	1.00	50	0.75 1.036 0.75	15 45 75
SB-WESTWNE	1.04	012 014 117 5	1.00	50	0.75 1.036 0.75	15 45 75
EB-WINECNE	1.03	002 656 018 5	1.00	50	0.75 1.036 0.75	15 45 75

FLOW	veh	111	687	148	681
CAPACITY	veh	838	2345	941	2189
AVE DELAY	secs	4.9	2.1	4.5	2.3
MAX DELAY	secs	6.2	2.6	5.6	2.9
AVE QUEUE	veh	0	0	0	0
MAX QUEUE	veh	0	0	0	1

AVEDEL s	2.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.2
COST $	18

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E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-WESTWNE	1.01	189 016 034 5	1.00	50	0.75 1.036 0.75	15 45 75
WB-WINECNE	1.06	209 1087 038 5	1.00	50	0.75 1.036 0.75	15 45 75
SB-WESTWNE	1.01	047 020 223 5	1.00	50	0.75 1.036 0.75	15 45 75
EB-WINECNE	1.01	030 588 021 5	1.00	50	0.75 1.036 0.75	15 45 75

FLOW	veh	244	1339	295	644	
CAPACITY	veh	826	2232	623	2183	
AVE DELAY	secs	6.1	4.0	11.3	2.3	
MAX DELAY	secs	8.0	5.4	16.4	2.9	
AVE QUEUE	veh	0	2	1	0	
MAX QUEUE	veh	0	2	1	0	

AVEDEL s	4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.2
COST $	49

15:1:09 YEAR 2020 WINNECONNE/WESTOWNE-2 LANE* 68

E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	20.00	25.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-WESTWNE	1.01	089 009 008 5	1.00	85	0.75 1.036 0.75	15 45 75
WB-WINECNE	1.02	133 467 082 5	1.00	85	0.75 1.036 0.75	15 45 75
SB-WESTWNE	1.04	012 014 117 5	1.00	85	0.75 1.036 0.75	15 45 75
EB-WINECNE	1.03	002 656 018 5	1.00	85	0.75 1.036 0.75	15 45 75

FLOW	veh	111	687	148	681	
CAPACITY	veh	633	2142	742	1988	
AVE DELAY	secs	6.8	2.4	6.0	2.7	
MAX DELAY	secs	8.8	3.0	7.5	3.4	
AVE QUEUE	veh	0	0	0	1	
MAX QUEUE	veh	0	1	0	1	

AVEDEL s	3.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST $	21

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E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-WESTWNE	1.01	189 016 034 5	1.00	85	0.75 1.036 0.75	15 45 75
WB-WINECNE	1.06	209 1087 038 5	1.00	85	0.75 1.036 0.75	15 45 75
SB-WESTWNE	1.01	047 020 223 5	1.00	85	0.75 1.036 0.75	15 45 75
EB-WINECNE	1.01	030 588 021 5	1.00	85	0.75 1.036 0.75	15 45 75

FLOW	veh	244	1339	295	644	
CAPACITY	veh	621	2036	418	1979	
AVE DELAY	secs	9.5	5.2	37.7	2.6	
MAX DELAY	secs	12.9	7.1	67.5	3.3	
AVE QUEUE	veh	1	2	3	0	
MAX QUEUE	veh	1	2	5	1	

AVEDEL	s 8.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.1
COST	$ 92

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E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.170 0.75	15 45 75
WB-WINECNE	1.01	000 353 280 5	1.00	50	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.01	322 000 400 0	1.00	50	0.75 1.170 0.75	15 45 75
EB-WINECNE	1.01	077 721 000 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	0	638	722	803	
CAPACITY	veh	706	2403	1944	1914	
AVE DELAY	secs	0.0	2.0	2.9	3.2	
MAX DELAY	secs	0.0	2.6	4.1	4.6	
AVE QUEUE	veh	0	0	1	1	
MAX QUEUE	veh	0	0	1	1	

AVEDEL	s 2.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.7
COST	$ 25

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E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.616 0.75	15 45 75
WB-WINECNE	1.01	000	860	351	5	1.00	50	0.75 1.616 0.75	15 45 75
SB-SB41OFF	1.01	423	000	562	0	1.00	50	0.75 1.616 0.75	15 45 75
EB-WINECNE	1.01	143	877	000	5	1.00	50	0.75 1.616 0.75	15 45 75

FLOW	veh	0	1216	985	1025	AVEDEL	s	6.8
CAPACITY	veh	542	2403	1528	1746	LOS	SIG	A
AVE DELAY	secs	0.0	3.1	11.6	6.4	LOS	UNSIG	A
MAX DELAY	secs	0.0	5.5	25.4	12.7			
AVE QUEUE	veh	0	1	3	2	VEHIC	HRS	6.1
MAX QUEUE	veh	0	2	6	3	COST	$	91

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E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75 1.170 0.75	15 45 75
WB-WINECNE	1.01	000	353	280	5	1.00	85	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.01	322	000	400	0	1.00	85	0.75 1.170 0.75	15 45 75
EB-WINECNE	1.01	077	721	000	5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	0	638	722	803
CAPACITY	veh	501	2198	1739	1709
AVE DELAY	secs	0.0	2.3	3.5	4.0
MAX DELAY	secs	0.0	3.0	5.0	5.9
AVE QUEUE	veh	0	0	1	1
MAX QUEUE	veh	0	0	1	1

AVEDEL	s 3.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST	$ 30

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E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75	1.616	0.75	15	45	75
WB-WINECNE	1.01	000	860	351	5	1.00	85	0.75	1.616	0.75	15	45	75
SB-SB41OFF	1.01	423	000	562	0	1.00	85	0.75	1.616	0.75	15	45	75
EB-WINECNE	1.01	143	877	000	5	1.00	85	0.75	1.616	0.75	15	45	75

FLOW	veh	0	1216	985	1025
CAPACITY	veh	338	2198	1323	1541
AVE DELAY	secs	0.0	3.9	43.7	10.6
MAX DELAY	secs	0.0	7.0	109.9	22.8
AVE QUEUE	veh	0	1	12	3
MAX QUEUE	veh	0	2	28	5

AVEDEL	s 18.2
LOS SIG	B
LOS UNSIG	C
VEHIC HRS	16.3
COST	$ 244

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E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	50.00	50.00	50.00	50.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.04	000	000	087	5	1.00	50	0.75 1.538 0.75	15 45 75
WB-WINECNE	1.02	000	687	000	5	1.00	50	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	50	0.75 1.538 0.75	15 45 75
EB-WINECNE	1.02	000	863	383	0	1.00	50	0.75 1.538 0.75	15 45 75

FLOW	veh	92	692	0	1246
CAPACITY	veh	593	2026	862	2375
AVE DELAY	secs	7.8	2.7	0.0	3.3
MAX DELAY	secs	13.8	4.5	0.0	5.6
AVE QUEUE	veh	0	1	0	1
MAX QUEUE	veh	0	1	0	2

AVEDEL	s 3.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.9
COST	$ 28

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME
NB-NB41OFF	1.03	000	000	229	5	1.00	50	0.75	0.891	0.75	15 45 75
WB-WINECNE	1.01	000	1033	000	5	1.00	50	0.75	0.891	0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	50	0.75	0.891	0.75	15 45 75
EB-WINECNE	1.01	000	994	386	5	1.00	50	0.75	0.891	0.75	15 45 75

FLOW	veh	234	1038	0	1385
CAPACITY	veh	532	1935	601	2399
AVE DELAY	secs	11.9	3.9	0.0	3.5
MAX DELAY	secs	15.0	4.7	0.0	4.1
AVE QUEUE	veh	1	1	0	1
MAX QUEUE	veh	1	1	0	2

AVEDEL s	4.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.3
COST $	49

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.04	000	000	087	5	1.00	85	0.75	1.538	0.75	15	45	75
WB-WINECNE	1.02	000	687	000	5	1.00	85	0.75	1.538	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	0	1.00	85	0.75	1.538	0.75	15	45	75
EB-WINECNE	1.02	000	863	383	0	1.00	85	0.75	1.538	0.75	15	45	75

FLOW	veh	92	692	0	1246
CAPACITY	veh	394	1823	658	2172
AVE DELAY	secs	15.1	3.2	0.0	4.1
MAX DELAY	secs	29.2	5.4	0.0	7.2
AVE QUEUE	veh	0	1	0	1
MAX QUEUE	veh	1	1	0	2

AVEDEL	s 4.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.4
COST	$ 37

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.03	000	000	229	5	1.00	85	0.75	0.891	0.75	15	45	75
WB-WINECNE	1.01	000	1033	000	5	1.00	85	0.75	0.891	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	0	1.00	85	0.75	0.891	0.75	15	45	75
EB-WINECNE	1.01	000	994	386	5	1.00	85	0.75	0.891	0.75	15	45	75

FLOW	veh	234	1038	0	1385
CAPACITY	veh	332	1730	397	2194
AVE DELAY	secs	38.3	5.1	0.0	4.4
MAX DELAY	secs	58.1	6.2	0.0	5.2
AVE QUEUE	veh	3	2	0	2
MAX QUEUE	veh	4	2	0	2

AVEDEL s	7.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.6
COST $	85

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.04	254 000 000 0	1.00	50	0.75 1.538 0.75	15 45 75
WB-WINECNE	1.02	000 000 000 5	1.00	50	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 1.538 0.75	15 45 75
EB-WINECNE	1.02	000 836 000 0	1.00	50	0.75 1.538 0.75	15 45 75

FLOW	veh	254	5	0	836
CAPACITY	veh	826	2383	1285	2379
AVE DELAY	secs	6.5	1.5	0.0	2.3
MAX DELAY	secs	11.3	2.2	0.0	3.7
AVE QUEUE	veh	0	0	0	1
MAX QUEUE	veh	1	0	0	1

AVEDEL s	3.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.0
COST $	15

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	286 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
WB-WINECNE	1.01	000 0000 000 5	1.00	50	0.75 0.891 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB-WINECNE	1.01	000 994 000 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	286	5	0	994
CAPACITY	veh	759	2407	1285	2403
AVE DELAY	secs	7.5	1.5	0.0	2.5
MAX DELAY	secs	8.9	1.6	0.0	2.9
AVE QUEUE	veh	1	0	0	1
MAX QUEUE	veh	1	0	0	1

AVEDEL s	3.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	19

15:1:09 YEAR 2020 WINNECONNE/NB 41 RAMP-SEMI NB* 64

E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	30.00	30.00	30.00	30.00		
DIA	(m)	55.00	55.00	55.00	55.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.04	254 000 000 0	1.00	85	0.75 1.538 0.75	15 45 75
WB-WINECNE	1.02	000 000 000 5	1.00	85	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 1.538 0.75	15 45 75
EB-WINECNE	1.02	000 836 000 0	1.00	85	0.75 1.538 0.75	15 45 75

FLOW	veh	254	5	0	836		
CAPACITY	veh	627	2180	1080	2176		
AVE DELAY	secs	10.7	1.6	0.0	2.7		
MAX DELAY	secs	19.8	2.4	0.0	4.3		
AVE QUEUE	veh	1	0	0	1		
MAX QUEUE	veh	1	0	0	1		

AVEDEL s	4.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST $	21

15:1:09 YEAR 2020 WINNECONNE/NB 41 RAMP-SEMI NB* 65

E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	286 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
WB-WINECNE	1.01	000 0000 000 5	1.00	85	0.75 0.891 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
EB-WINECNE	1.01	000 994 000 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	286	5	0	994	
CAPACITY	veh	558	2202	1080	2198	
AVE DELAY	secs	13.0	1.6	0.0	2.9	
MAX DELAY	secs	16.1	1.8	0.0	3.4	
AVE QUEUE	veh	1	0	0	1	
MAX QUEUE	veh	1	0	0	1	

AVEDEL s	5.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST $	28

15:1:09 YEAR 2020 WINNECONNE/NB 41 RAMP-SEMI WB* 55

E	(m)	8.00	4.30	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	7.31	
RAD	(m)	25.00	30.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.04	000 000 000 0	1.00	50	0.75 1.538 0.75	15 45 75
WB-WINECNE	1.02	535 000 000 0	1.00	50	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 1.538 0.75	15 45 75
EB-WINECNE	1.02	000 000 383 0	1.00	50	0.75 1.538 0.75	15 45 75

FLOW	veh	0	535	0	383	
CAPACITY	veh	2067	1085	1287	2383	
AVE DELAY	secs	0.0	6.9	0.0	1.8	
MAX DELAY	secs	0.0	12.1	0.0	2.7	
AVE QUEUE	veh	0	1	0	0	
MAX QUEUE	veh	0	1	0	0	

AVEDEL s	4.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.2
COST $	18

15:1:09 YEAR 2020 WINNECONNE/NB 41 RAMP-SEMI WB* 56

E	(m)	8.00	4.30	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	7.31	
RAD	(m)	25.00	30.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
WB-WINECNE	1.01	733 0000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB-WINECNE	1.01	000 000 386 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	0	733	0	386	
CAPACITY	veh	2087	1096	1287	2407	
AVE DELAY	secs	0.0	9.7	0.0	1.8	
MAX DELAY	secs	0.0	11.9	0.0	2.0	
AVE QUEUE	veh	0	2	0	0	
MAX QUEUE	veh	0	2	0	0	

AVEDEL s	6.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.2
COST $	32

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E (m)	8.00	4.30	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	3.65	3.65	7.31
RAD (m)	25.00	30.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.04	000 000 000 0	1.00	85	0.75 1.538 0.75	15 45 75
WB-WINECNE	1.02	535 000 000 0	1.00	85	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 1.538 0.75	15 45 75
EB-WINECNE	1.02	000 000 383 0	1.00	85	0.75 1.538 0.75	15 45 75

FLOW	veh	0	535	0	383	
CAPACITY	veh	1868	882	1083	2180	
AVE DELAY	secs	0.0	12.0	0.0	2.0	
MAX DELAY	secs	0.0	22.6	0.0	3.0	
AVE QUEUE	veh	0	2	0	0	
MAX QUEUE	veh	0	3	0	0	

AVEDEL s	7.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST $	30

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E	(m)	8.00	4.30	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	3.65	3.65	7.31	
RAD	(m)	25.00	30.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
WB-WINECNE	1.01	733 0000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
EB-WINECNE	1.01	000 000 386 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	0	733	0	386	
CAPACITY	veh	1886	891	1083	2202	
AVE DELAY	secs	0.0	21.7	0.0	2.0	
MAX DELAY	secs	0.0	29.7	0.0	2.2	
AVE QUEUE	veh	0	5	0	0	
MAX QUEUE	veh	0	6	0	0	

AVEDEL	s 14.9
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	4.6
COST	$ 69

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E (m)	8.00	12.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	10.97	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	200	142	174	5	1.00	50	0.75 1.398 0.75	15 45 75
WB-WINECNE	1.01	101	800	154	5	1.00	50	0.75 1.398 0.75	15 45 75
SB-GRN BAY	1.02	120	201	123	5	1.00	50	0.75 1.398 0.75	15 45 75
EB-WINECNE	1.01	220	657	154	5	1.00	50	0.75 1.398 0.75	15 45 75

FLOW	veh	521	1060	449	1036
CAPACITY	veh	1754	3165	1606	2066
AVE DELAY	secs	2.9	1.7	3.2	3.6
MAX DELAY	secs	4.6	2.6	5.0	6.0
AVE QUEUE	veh	0	1	0	1
MAX QUEUE	veh	1	1	1	1

AVEDEL s	2.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.4
COST $	35

15:1:09 YEAR 2020 WINNECONNE/GREEN BAY-3 LANE* 104

E	(m)	8.00	12.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	10.97	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	60.00	60.00	60.00	60.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	118	194	325	5	1.00	50	0.75 0.830 0.75	15 45 75
WB-WINECNE	1.01	102	1001	141	5	1.00	50	0.75 0.830 0.75	15 45 75
SB-GRN BAY	1.01	337	195	186	5	1.00	50	0.75 0.830 0.75	15 45 75
EB-WINECNE	1.01	210	743	302	5	1.00	50	0.75 0.830 0.75	15 45 75

FLOW	veh	642	1249	723	1260
CAPACITY	veh	1551	2851	1390	2038
AVE DELAY	secs	3.9	2.2	5.3	4.5
MAX DELAY	secs	4.3	2.4	6.0	5.1
AVE QUEUE	veh	1	1	1	2
MAX QUEUE	veh	1	1	1	2

AVEDEL	s 3.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.1
COST	$ 62

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E (m)	8.00	12.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	10.97	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	200	142	174	5	1.00	85	0.75 1.398 0.75	15 45 75
WB-WINECNE	1.01	101	800	154	5	1.00	85	0.75 1.398 0.75	15 45 75
SB-GRN BAY	1.02	120	201	123	5	1.00	85	0.75 1.398 0.75	15 45 75
EB-WINECNE	1.01	220	657	154	5	1.00	85	0.75 1.398 0.75	15 45 75

FLOW	veh	521	1060	449	1036
CAPACITY	veh	1550	2960	1403	1861
AVE DELAY	secs	3.6	1.9	3.9	4.7
MAX DELAY	secs	5.8	2.9	6.4	7.9
AVE QUEUE	veh	1	1	1	1
MAX QUEUE	veh	1	1	1	2

AVEDEL	s 3.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.9
COST	$ 44

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E (m)	8.00	12.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	10.97	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-GRN BAY	1.01	118	194	325	5	1.00	85	0.75	0.830	0.75	15	45	75
WB-WINECNE	1.01	102	1001	141	5	1.00	85	0.75	0.830	0.75	15	45	75
SB-GRN BAY	1.01	337	195	186	5	1.00	85	0.75	0.830	0.75	15	45	75
EB-WINECNE	1.01	210	743	302	5	1.00	85	0.75	0.830	0.75	15	45	75

FLOW	veh	642	1249	723	1260
CAPACITY	veh	1347	2646	1185	1833
AVE DELAY	secs	5.0	2.5	7.6	6.1
MAX DELAY	secs	5.6	2.8	8.9	7.0
AVE QUEUE	veh	1	1	2	2
MAX QUEUE	veh	1	1	2	2

AVEDEL s	5.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.5
COST $	82

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E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	20.00	25.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-WESTWNE	1.01	102 010 009 5	1.00	50	0.75 1.036 0.75	15 45 75
WB-WINECNE	1.02	262 520 090 5	1.00	50	0.75 1.036 0.75	15 45 75
SB-WESTWNE	1.04	013 015 118 5	1.00	50	0.75 1.036 0.75	15 45 75
EB-WINECNE	1.03	002 725 027 5	1.00	50	0.75 1.036 0.75	15 45 75

FLOW	veh	126	877	151	759
CAPACITY	veh	796	2337	1853	2181
AVE DELAY	secs	5.3	2.4	2.1	2.5
MAX DELAY	secs	6.8	3.0	2.6	3.1
AVE QUEUE	veh	0	1	0	1
MAX QUEUE	veh	0	1	0	1

AVEDEL s	2.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST $	21

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E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	20.00	25.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-WESTWNE	1.01	214	018	042	5	1.00	50	0.75	1.036	0.75	15	45	75
WB-WINECNE	1.06	236	1225	044	5	1.00	50	0.75	1.036	0.75	15	45	75
SB-WESTWNE	1.01	053	023	283	5	1.00	50	0.75	1.036	0.75	15	45	75
EB-WINECNE	1.01	026	678	028	5	1.00	50	0.75	1.036	0.75	15	45	75

FLOW	veh	279	1510	364	737
CAPACITY	veh	742	2219	1352	2131
AVE DELAY	secs	7.7	5.1	3.6	2.5
MAX DELAY	secs	10.5	7.2	4.8	3.2
AVE QUEUE	veh	1	2	0	1
MAX QUEUE	veh	1	3	0	1

AVEDEL s	4.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.6
COST $	54

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E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	20.00	25.00	20.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-WESTWNE	1.01	102 010 009 5	1.00	85	0.75 1.036 0.75	15 45 75
WB-WINECNE	1.02	262 520 090 5	1.00	85	0.75 1.036 0.75	15 45 75
SB-WESTWNE	1.04	013 015 118 5	1.00	85	0.75 1.036 0.75	15 45 75
EB-WINECNE	1.03	002 725 027 5	1.00	85	0.75 1.036 0.75	15 45 75

FLOW	veh	126	877	151	759
CAPACITY	veh	591	2134	1654	1980
AVE DELAY	secs	7.7	2.8	2.4	2.9
MAX DELAY	secs	10.1	3.6	2.9	3.7
AVE QUEUE	veh	0	1	0	1
MAX QUEUE	veh	0	1	0	1

AVEDEL s	3.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.7
COST $	25

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E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	20.00	25.00	20.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-WESTWNE	1.01	214	018	042	5	1.00	85	0.75	1.036	0.75	15	45	75
WB-WINECNE	1.06	236	1225	044	5	1.00	85	0.75	1.036	0.75	15	45	75
SB-WESTWNE	1.01	053	023	283	5	1.00	85	0.75	1.036	0.75	15	45	75
EB-WINECNE	1.01	026	678	028	5	1.00	85	0.75	1.036	0.75	15	45	75

FLOW	veh	279	1510	364	737
CAPACITY	veh	537	2024	1148	1926
AVE DELAY	secs	14.3	7.2	4.6	3.0
MAX DELAY	secs	21.1	10.6	6.3	3.8
AVE QUEUE	veh	1	3	0	1
MAX QUEUE	veh	2	4	1	1

AVEDEL	s 6.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.2
COST	$ 78

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E	(m)	4.30	8.00	12.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	55.00	55.00	55.00	55.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.170 0.75	15 45 75
WB-WINECNE	1.01	000 517 288 5	1.00	50	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.01	363 000 451 0	1.00	50	0.75 1.170 0.75	15 45 75
EB-WINECNE	1.01	000 813 000 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	0	810	814	818	AVEDEL	s 2.6
CAPACITY	veh	632	2403	2412	1871	LOS SIG	A
AVE DELAY	secs	0.0	2.2	2.2	3.4	LOS UNSIG	A
MAX DELAY	secs	0.0	3.0	3.1	4.9		
AVE QUEUE	veh	0	1	1	1	VEHIC HRS	1.8
MAX QUEUE	veh	0	1	1	1	COST	$ 27

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E	(m)	4.30	8.00	12.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	55.00	55.00	55.00	55.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.616 0.75	15 45 75
WB-WINECNE	1.01	000 882 441 5	1.00	50	0.75 1.616 0.75	15 45 75
SB-SB41OFF	1.01	447 000 634 0	1.00	50	0.75 1.616 0.75	15 45 75
EB-WINECNE	1.01	000 947 000 5	1.00	50	0.75 1.616 0.75	15 45 75

FLOW	veh	0	1328	1081	952	AVEDEL s	5.2
CAPACITY	veh	469	2403	1973	1629	LOS SIG	A
AVE DELAY	secs	0.0	3.6	5.4	7.2	LOS UNSIG	A
MAX DELAY	secs	0.0	6.4	10.9	14.6		
AVE QUEUE	veh	0	1	2	2	VEHIC HRS	4.8
MAX QUEUE	veh	0	2	3	3	COST $	72

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E	(m)	4.30	8.00	12.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.170 0.75	15 45 75
WB-WINECNE	1.01	000 517 288 5	1.00	85	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.01	363 000 451 0	1.00	85	0.75 1.170 0.75	15 45 75
EB-WINECNE	1.01	000 813 000 5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	0	810	814	818	
CAPACITY	veh	427	2198	2207	1666	
AVE DELAY	secs	0.0	2.6	2.6	4.3	
MAX DELAY	secs	0.0	3.5	3.7	6.4	
AVE QUEUE	veh	0	1	1	1	
MAX QUEUE	veh	0	1	1	1	

AVEDEL	s 3.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.1
COST	$ 32

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E	(m)	4.30	8.00	12.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	55.00	55.00	55.00	55.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75	1.616	0.75	15	45	75
WB-WINECNE	1.01	000	882	441	5	1.00	85	0.75	1.616	0.75	15	45	75
SB-SB41OFF	1.01	447	000	634	0	1.00	85	0.75	1.616	0.75	15	45	75
EB-WINECNE	1.01	000	947	000	5	1.00	85	0.75	1.616	0.75	15	45	75

FLOW	veh	0	1328	1081	952	AVEDEL	s 8.6
CAPACITY	veh	265	2198	1768	1424	LOS SIG	A
AVE DELAY	secs	0.0	4.6	8.6	14.1	LOS UNSIG	A
MAX DELAY	secs	0.0	8.4	18.6	31.6		
AVE QUEUE	veh	0	2	3	4	VEHIC HRS	8.0
MAX QUEUE	veh	0	3	5	7	COST	$ 120

E	(m)	4.30	8.00	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.170 0.75	15 45 75
WB-WINECNE	1.01	000 000 288 0	1.00	50	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.01	000 000 000 0	1.00	50	0.75 1.170 0.75	15 45 75
EB-WINECNE	1.01	077 000 000 0	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	0	288	0	77	
CAPACITY	veh	1287	2407	2199	1139	
AVE DELAY	secs	0.0	1.7	0.0	3.3	
MAX DELAY	secs	0.0	2.2	0.0	4.3	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL	s 2.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.2
COST	$ 3

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E	(m)	4.30	8.00	8.00	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	7.31	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	55.00	55.00	55.00	55.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.616 0.75	15 45 75
WB-WINECNE	1.01	000 000 441 0	1.00	50	0.75 1.616 0.75	15 45 75
SB-SB41OFF	1.01	000 000 0000 0	1.00	50	0.75 1.616 0.75	15 45 75
EB-WINECNE	1.01	200 000 000 0	1.00	50	0.75 1.616 0.75	15 45 75

FLOW	veh	0	441	0	200	AVEDEL s	2.5
CAPACITY	veh	1287	2407	2089	1061	LOS SIG	A
AVE DELAY	secs	0.0	1.8	0.0	4.1	LOS UNSIG	A
MAX DELAY	secs	0.0	2.8	0.0	6.7		
AVE QUEUE	veh	0	0	0	0	VEHIC HRS	0.4
MAX QUEUE	veh	0	0	0	0	COST $	7

E	(m)	4.30	8.00	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.170 0.75	15 45 75
WB-WINECNE	1.01	000 000 288 0	1.00	85	0.75 1.170 0.75	15 45 75
SB-SB41OFF	1.01	000 000 000 0	1.00	85	0.75 1.170 0.75	15 45 75
EB-WINECNE	1.01	077 000 000 0	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	0	288	0	77	
CAPACITY	veh	1083	2202	1994	934	
AVE DELAY	secs	0.0	1.8	0.0	4.1	
MAX DELAY	secs	0.0	2.4	0.0	5.4	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL	s 2.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.2
COST	$ 4

E	(m)	4.30	8.00	8.00	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.616 0.75	15 45 75
WB-WINECNE	1.01	000 000 441 0	1.00	85	0.75 1.616 0.75	15 45 75
SB-SB41OFF	1.01	000 000 0000 0	1.00	85	0.75 1.616 0.75	15 45 75
EB-WINECNE	1.01	200 000 000 0	1.00	85	0.75 1.616 0.75	15 45 75

FLOW	veh	0	441	0	200	
CAPACITY	veh	1083	2202	1884	856	
AVE DELAY	secs	0.0	2.0	0.0	5.5	
MAX DELAY	secs	0.0	3.1	0.0	9.1	
AVE QUEUE	veh	0	0	0	0	
MAX QUEUE	veh	0	0	0	0	

AVEDEL	s 3.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.6
COST	$ 8

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.04	000 000 098 0	1.00	50	0.75 1.538 0.75	15 45 75
WB-WINECNE	1.02	000 708 000 5	1.00	50	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 1.538 0.75	15 45 75
EB-WINECNE	1.02	000 864 423 5	1.00	50	0.75 1.538 0.75	15 45 75

FLOW	veh	98	713	0	1292
CAPACITY	veh	596	2003	863	2379
AVE DELAY	secs	7.8	2.8	0.0	3.5
MAX DELAY	secs	13.9	4.7	0.0	6.0
AVE QUEUE	veh	0	1	0	1
MAX QUEUE	veh	0	1	0	2

AVEDEL	s 3.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST	$ 30

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	000 000 247 0	1.00	50	0.75 0.891 0.75	15 45 75
WB-WINECNE	1.01	000 1164 000 5	1.00	50	0.75 0.891 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB-WINECNE	1.01	000 1027 435 5	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	247	1169	0	1467
CAPACITY	veh	520	1909	554	2403
AVE DELAY	secs	13.0	4.8	0.0	3.8
MAX DELAY	secs	16.6	5.8	0.0	4.5
AVE QUEUE	veh	1	2	0	2
MAX QUEUE	veh	1	2	0	2

AVEDEL s	5.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.0
COST $	60

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.04	000 000 098 0	1.00	85	0.75 1.538 0.75	15 45 75
WB-WINECNE	1.02	000 708 000 5	1.00	85	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 1.538 0.75	15 45 75
EB-WINECNE	1.02	000 864 423 5	1.00	85	0.75 1.538 0.75	15 45 75

FLOW	veh	98	713	0	1292
CAPACITY	veh	397	1800	658	2176
AVE DELAY	secs	15.3	3.4	0.0	4.4
MAX DELAY	secs	29.7	5.7	0.0	7.8
AVE QUEUE	veh	0	1	0	2
MAX QUEUE	veh	1	1	0	2

AVEDEL	s 4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.7
COST	$ 40

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	000 000 247 0	1.00	85	0.75 0.891 0.75	15 45 75
WB-WINECNE	1.01	000 1164 000 5	1.00	85	0.75 0.891 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
EB-WINECNE	1.01	000 1027 435 5	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	247	1169	0	1467
CAPACITY	veh	319	1704	350	2198
AVE DELAY	secs	52.9	6.6	0.0	4.8
MAX DELAY	secs	85.8	8.3	0.0	5.8
AVE QUEUE	veh	4	2	0	2
MAX QUEUE	veh	6	3	0	2

AVEDEL s	9.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.7
COST $	116

E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	55.00	55.00	55.00	55.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.04	279 000 000 0	1.00	50	0.75 1.538 0.75	15 45 75
WB-WINECNE	1.02	000 000 000 5	1.00	50	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 1.538 0.75	15 45 75
EB-WINECNE	1.02	000 864 000 0	1.00	50	0.75 1.538 0.75	15 45 75

FLOW	veh	279	5	0	864	
CAPACITY	veh	812	2383	1285	2379	
AVE DELAY	secs	7.1	1.5	0.0	2.4	
MAX DELAY	secs	12.5	2.2	0.0	3.8	
AVE QUEUE	veh	1	0	0	1	
MAX QUEUE	veh	1	0	0	1	

AVEDEL	s 3.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST	$ 17

15:1:09 YEAR 2035 WINNECONNE/NB 41 RAMP-NB SEMI* 60

E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	322 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
WB-WINECNE	1.01	000 0000 000 5	1.00	50	0.75 0.891 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 0.891 0.75	15 45 75
EB-WINECNE	1.01	000 1027 000 0	1.00	50	0.75 0.891 0.75	15 45 75

FLOW	veh	322	5	0	1027
CAPACITY	veh	742	2407	1285	2403
AVE DELAY	secs	8.4	1.5	0.0	2.6
MAX DELAY	secs	10.1	1.6	0.0	2.9
AVE QUEUE	veh	1	0	0	1
MAX QUEUE	veh	1	0	0	1

AVEDEL s	4.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.5
COST $	22

15:1:09 YEAR 2035 WINNECONNE/NB 41 RAMP-NB SEMI* 61

E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.04	279 000 000 0	1.00	85	0.75 1.538 0.75	15 45 75
WB-WINECNE	1.02	000 000 000 5	1.00	85	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 1.538 0.75	15 45 75
EB-WINECNE	1.02	000 864 000 0	1.00	85	0.75 1.538 0.75	15 45 75

FLOW	veh	279	5	0	864
CAPACITY	veh	613	2180	1080	2176
AVE DELAY	secs	12.7	1.6	0.0	2.7
MAX DELAY	secs	23.9	2.4	0.0	4.4
AVE QUEUE	veh	1	0	0	1
MAX QUEUE	veh	2	0	0	1

AVEDEL	s 5.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.6
COST	$ 25

15:1:09 YEAR 2035 WINNECONNE/NB 41 RAMP-NB SEMI* 62

E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	55.00	55.00	55.00	55.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.03	322 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
WB-WINECNE	1.01	000 0000 000 5	1.00	85	0.75 0.891 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.891 0.75	15 45 75
EB-WINECNE	1.01	000 1027 000 0	1.00	85	0.75 0.891 0.75	15 45 75

FLOW	veh	322	5	0	1027
CAPACITY	veh	541	2202	1080	2198
AVE DELAY	secs	16.1	1.6	0.0	3.0
MAX DELAY	secs	20.7	1.8	0.0	3.5
AVE QUEUE	veh	1	0	0	1
MAX QUEUE	veh	2	0	0	1

AVEDEL	s 6.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.3
COST	$ 35

15:1:09 YEAR 2035 WINNECONNE/GREEN BAY-3 LANE* 100

E (m)	8.00	12.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	10.97	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	226 154 200 5	1.00	50	0.75 1.398 0.75	15 45 75
WB-WINECNE	1.01	115 1054 160 5	1.00	50	0.75 1.398 0.75	15 45 75
SB-GRN BAY	1.02	140 374 171 5	1.00	50	0.75 1.398 0.75	15 45 75
EB-WINECNE	1.01	248 714 173 5	1.00	50	0.75 1.398 0.75	15 45 75

FLOW	veh	585	1334	690	1140
CAPACITY	veh	1669	3114	1412	1909
AVE DELAY	secs	3.4	2.1	5.8	5.3
MAX DELAY	secs	5.5	3.3	10.4	9.3
AVE QUEUE	veh	1	1	1	2
MAX QUEUE	veh	1	1	2	3

AVEDEL s	3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.1
COST $	61

15:1:09 YEAR 2035 WINNECONNE/GREEN BAY-3 LANE* 105

E (m)	8.00	12.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	10.97	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-GRN BAY	1.01	121	250	374	5	1.00	50	0.75	0.830	0.75	15	45	75
WB-WINECNE	1.01	132	1128	159	5	1.00	50	0.75	0.830	0.75	15	45	75
SB-GRN BAY	1.01	380	211	219	5	1.00	50	0.75	0.830	0.75	15	45	75
EB-WINECNE	1.01	242	797	340	5	1.00	50	0.75	0.830	0.75	15	45	75

FLOW	veh	750	1424	815	1384
CAPACITY	veh	1466	2723	1257	1992
AVE DELAY	secs	4.9	2.7	8.0	5.8
MAX DELAY	secs	5.6	3.0	9.5	6.6
AVE QUEUE	veh	1	1	2	2
MAX QUEUE	veh	1	1	2	2

AVEDEL s	5.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	6.1
COST $	92

15:1:09 YEAR 2035 WINNECONNE/GREEN BAY-3 LANE* 102

E (m)	8.00	12.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	10.97	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	60.00	60.00	60.00	60.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	226 154 200 5	1.00	85	0.75 1.398 0.75	15 45 75
WB-WINECNE	1.01	115 1054 160 5	1.00	85	0.75 1.398 0.75	15 45 75
SB-GRN BAY	1.02	140 374 171 5	1.00	85	0.75 1.398 0.75	15 45 75
EB-WINECNE	1.01	248 714 173 5	1.00	85	0.75 1.398 0.75	15 45 75

FLOW	veh	585	1334	690	1140
CAPACITY	veh	1464	2909	1209	1704
AVE DELAY	secs	4.3	2.3	9.3	8.0
MAX DELAY	secs	7.2	3.8	17.9	15.1
AVE QUEUE	veh	1	1	2	3
MAX QUEUE	veh	1	1	3	4

AVEDEL s	5.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	5.9
COST $	88

15:1:09 YEAR 2035 WINNECONNE/GREEN BAY-3 LANE* 104

E	(m)	8.00	12.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	10.97	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	60.00	60.00	60.00	60.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	121 250 374 5	1.00	85	0.75 0.830 0.75	15 45 75
WB-WINECNE	1.01	132 1128 159 5	1.00	85	0.75 0.830 0.75	15 45 75
SB-GRN BAY	1.01	380 211 219 5	1.00	85	0.75 0.830 0.75	15 45 75
EB-WINECNE	1.01	242 797 340 5	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	750	1424	815	1384	AVEDEL	s 7.7
CAPACITY	veh	1261	2518	1052	1787	LOS SIG	A
AVE DELAY	secs	6.9	3.2	14.8	8.6	LOS UNSIG	A
MAX DELAY	secs	8.0	3.6	19.1	10.3		
AVE QUEUE	veh	1	1	3	3	VEHIC HRS	9.4
MAX QUEUE	veh	2	1	4	4	COST	$ 141

21:3:11 YEAR 2020 CTH BB/NICOLET-NB BYP* 92

E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	000 083 069 5	1.00	50	0.75 1.398 0.75	15 45 75
WB-PROSPCT	1.20	041 559 655 5	1.00	50	0.75 1.398 0.75	15 45 75
SB-NICOLET	1.01	074 071 085 5	1.00	50	0.75 1.398 0.75	15 45 75
EB-PROSPCT	1.17	139 502 033 5	1.00	50	0.75 1.398 0.75	15 45 75

FLOW	veh	157	1260	235	679
CAPACITY	veh	908	1927	1283	1488
AVE DELAY	secs	4.8	6.0	3.6	4.7
MAX DELAY	secs	7.3	10.6	5.9	8.0
AVE QUEUE	veh	0.2	2.2	0.2	0.9
MAX QUEUE	veh	0.3	3.2	0.3	1.3

AVEDEL s	5.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.4
COST $	52

21:3:11 YEAR 2020 CTH BB/NICOLET-NB BYP* 93

E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	000 166 118 5	1.00	50	0.75 1.335 0.75	15 45 75
WB-PROSPCT	1.03	078 413 369 5	1.00	50	0.75 1.335 0.75	15 45 75
SB-NICOLET	1.01	036 083 093 5	1.00	50	0.75 1.335 0.75	15 45 75
EB-PROSPCT	1.01	183 753 120 5	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	289	865	217	1061
CAPACITY	veh	767	2085	1737	2015
AVE DELAY	secs	7.9	3.0	2.3	3.9
MAX DELAY	secs	13.0	4.5	3.4	6.4
AVE QUEUE	veh	0.7	0.7	0.1	1.2
MAX QUEUE	veh	0.9	0.9	0.2	1.6

AVEDEL s	3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.7
COST $	40

21:3:11 YEAR 2020 CTH BB/NICOLET-NB BYP* 94

E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	000 083 069 5	1.00	85	0.75 1.398 0.75	15 45 75
WB-PROSPCT	1.20	041 559 655 5	1.00	85	0.75 1.398 0.75	15 45 75
SB-NICOLET	1.01	074 071 085 5	1.00	85	0.75 1.398 0.75	15 45 75
EB-PROSPCT	1.17	139 502 033 5	1.00	85	0.75 1.398 0.75	15 45 75

FLOW	veh	157	1260	235	679
CAPACITY	veh	705	1755	1078	1311
AVE DELAY	secs	6.6	8.9	4.6	6.3
MAX DELAY	secs	10.5	16.6	7.8	11.2
AVE QUEUE	veh	0.3	3.2	0.3	1.2
MAX QUEUE	veh	0.4	5.0	0.4	1.8

AVEDEL s	7.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.9
COST $	73

21:3:11 YEAR 2020 CTH BB/NICOLET-NB BYP* 95

E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	000 166 118 5	1.00	85	0.75 1.335 0.75	15 45 75
WB-PROSPCT	1.03	078 413 369 5	1.00	85	0.75 1.335 0.75	15 45 75
SB-NICOLET	1.01	036 083 093 5	1.00	85	0.75 1.335 0.75	15 45 75
EB-PROSPCT	1.01	183 753 120 5	1.00	85	0.75 1.335 0.75	15 45 75

FLOW	veh	289	865	217	1061
CAPACITY	veh	565	1884	1533	1810
AVE DELAY	secs	15.7	3.6	2.7	5.2
MAX DELAY	secs	28.5	5.6	4.0	8.8
AVE QUEUE	veh	1.3	0.9	0.2	1.6
MAX QUEUE	veh	2.0	1.2	0.2	2.2

AVEDEL s	5.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.8
COST $	57

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	324 000 000 0	1.00	50	0.75 1.398 0.75	15 45 75
WB-PROSPCT	1.20	000 000 000 5	1.00	50	0.75 1.398 0.75	15 45 75
SB-NICOLET	1.01	000 000 085 0	1.00	50	0.75 1.398 0.75	15 45 75
EB-PROSPCT	1.17	000 502 033 0	1.00	50	0.75 1.398 0.75	15 45 75

FLOW	veh	324	5	85	535
CAPACITY	veh	1492	2036	2443	2053
AVE DELAY	secs	3.0	1.7	1.5	2.3
MAX DELAY	secs	4.7	2.4	2.1	3.4
AVE QUEUE	veh	0.3	0.0	0.0	0.4
MAX QUEUE	veh	0.4	0.0	0.0	0.4

AVEDEL s	2.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.7
COST $	10

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	775 000 000 0	1.00	50	0.75 1.335 0.75	15 45 75
WB-PROSPCT	1.03	000 000 000 5	1.00	50	0.75 1.335 0.75	15 45 75
SB-NICOLET	1.01	000 000 093 0	1.00	50	0.75 1.335 0.75	15 45 75
EB-PROSPCT	1.01	000 753 120 0	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	775	5	93	873	
CAPACITY	veh	1318	2311	2444	2373	
AVE DELAY	secs	7.7	1.5	1.5	2.4	
MAX DELAY	secs	13.7	2.1	2.1	3.5	
AVE QUEUE	veh	1.7	0.0	0.0	0.6	
MAX QUEUE	veh	2.6	0.0	0.0	0.7	

AVEDEL s	4.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.3
COST $	34

E (m)	8.00	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	324 000 000 0	1.00	85	0.75 1.398 0.75	15 45 75
WB-PROSPCT	1.20	000 000 000 5	1.00	85	0.75 1.398 0.75	15 45 75
SB-NICOLET	1.01	000 000 085 0	1.00	85	0.75 1.398 0.75	15 45 75
EB-PROSPCT	1.17	000 502 033 0	1.00	85	0.75 1.398 0.75	15 45 75

FLOW	veh	324	5	85	535
CAPACITY	veh	1289	1863	2238	1876
AVE DELAY	secs	3.7	1.9	1.6	2.6
MAX DELAY	secs	5.8	2.6	2.3	3.9
AVE QUEUE	veh	0.3	0.0	0.0	0.4
MAX QUEUE	veh	0.4	0.0	0.0	0.5

AVEDEL s	2.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST $	11

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	25.00	25.00	25.00	25.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	775 000 000 0	1.00	85	0.75 1.335 0.75	15 45 75
WB-PROSPCT	1.03	000 000 000 5	1.00	85	0.75 1.335 0.75	15 45 75
SB-NICOLET	1.01	000 000 093 0	1.00	85	0.75 1.335 0.75	15 45 75
EB-PROSPCT	1.01	000 753 120 0	1.00	85	0.75 1.335 0.75	15 45 75

FLOW	veh	775	5	93	873	AVEDEL	s 8.4
CAPACITY	veh	1115	2110	2239	2168	LOS SIG	A
AVE DELAY	secs	15.7	1.7	1.6	2.8	LOS UNSIG	A
MAX DELAY	secs	31.1	2.3	2.2	4.1		
AVE QUEUE	veh	3.4	0.0	0.0	0.7	VEHIC HRS	4.1
MAX QUEUE	veh	5.9	0.0	0.0	0.9	COST	$ 61

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	53.00	53.00	53.00	53.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.892 0.75	15 45 75
WB-PROSPCT	1.05	000	826	239	5	1.00	50	0.75 1.892 0.75	15 45 75
SB-SB41OFF	1.09	000	000	080	5	1.00	50	0.75 1.892 0.75	15 45 75
EB-PROSPCT	1.06	182	761	000	5	1.00	50	0.75 1.892 0.75	15 45 75

FLOW veh	0	1070	85	948	
CAPACITY veh	830	2347	662	2087	
AVE DELAY secs	0.0	2.9	6.8	3.4	
MAX DELAY secs	0.0	5.5	13.0	6.5	
AVE QUEUE veh	0.0	0.9	0.2	0.9	
MAX QUEUE veh	0.0	1.3	0.2	1.3	

AVEDEL s	3.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.9
COST $	29

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E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
WB-PROSPCT	1.05	000 708 297 5	1.00	50	0.75 1.465 0.75	15 45 75
SB-SB41OFF	1.01	000 000 070 5	1.00	50	0.75 1.465 0.75	15 45 75
EB-PROSPCT	1.04	428 1206 000 5	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	0	1010	75	1639	
CAPACITY	veh	603	2347	748	2096	
AVE DELAY	secs	0.0	2.7	5.4	13.8	
MAX DELAY	secs	0.0	4.3	8.8	29.9	
AVE QUEUE	veh	0.0	0.8	0.1	6.4	
MAX QUEUE	veh	0.0	1.0	0.2	11.7	

AVEDEL	s 9.4
LOS	SIG A
LOS	UNSIG A
VEHIC	HRS 7.1
COST	$ 107

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E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.892 0.75	15 45 75
WB-PROSPCT	1.05	000 826 239 5	1.00	85	0.75 1.892 0.75	15 45 75
SB-SB41OFF	1.09	000 000 080 5	1.00	85	0.75 1.892 0.75	15 45 75
EB-PROSPCT	1.06	182 761 000 5	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	0	1070	85	948	
CAPACITY	veh	625	2150	472	1892	
AVE DELAY	secs	0.0	3.6	11.2	4.2	
MAX DELAY	secs	0.0	6.8	22.8	8.4	
AVE QUEUE	veh	0.0	1.1	0.3	1.2	
MAX QUEUE	veh	0.0	1.6	0.4	1.7	

AVEDEL s	4.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.4
COST $	37

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E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
WB-PROSPCT	1.05	000 708 297 5	1.00	85	0.75 1.465 0.75	15 45 75
SB-SB41OFF	1.01	000 000 070 5	1.00	85	0.75 1.465 0.75	15 45 75
EB-PROSPCT	1.04	428 1206 000 5	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	0	1010	75	1639	
CAPACITY	veh	399	2150	543	1897	
AVE DELAY	secs	0.0	3.2	8.1	45.7	
MAX DELAY	secs	0.0	5.1	13.7	113.6	
AVE QUEUE	veh	0.0	0.9	0.2	21.0	
MAX QUEUE	veh	0.0	1.2	0.2	49.0	

AVEDEL	s 28.9
LOS SIG	C
LOS UNSIG	D
VEHIC HRS	21.9
COST	$ 328

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E	(m)	4.30	8.00	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.892 0.75	15 45 75
WB-PROSPCT	1.05	000 826 239 5	1.00	50	0.75 1.892 0.75	15 45 75
SB-SB41OFF	1.09	292 000 000 0	1.00	50	0.75 1.892 0.75	15 45 75
EB-PROSPCT	1.06	000 000 000 5	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	0	1070	292	5	
CAPACITY	veh	1262	2351	662	1119	
AVE DELAY	secs	0.0	2.9	13.9	3.1	
MAX DELAY	secs	0.0	5.5	30.1	5.0	
AVE QUEUE	veh	0.0	0.9	1.2	0.0	
MAX QUEUE	veh	0.0	1.3	1.9	0.0	

AVEDEL	s 5.3
LOS	SIG A
LOS	UNSIG A
VEHIC	HRS 2.0
COST	$ 30

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E	(m)	4.30	8.00	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
WB-PROSPCT	1.05	000 708 297 5	1.00	50	0.75 1.465 0.75	15 45 75
SB-SB41OFF	1.01	138 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
EB-PROSPCT	1.04	000 0000 000 5	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	0	1010	138	5	
CAPACITY	veh	1262	2351	748	1110	
AVE DELAY	secs	0.0	2.7	6.1	3.2	
MAX DELAY	secs	0.0	4.3	10.1	4.7	
AVE QUEUE	veh	0.0	0.8	0.2	0.0	
MAX QUEUE	veh	0.0	1.0	0.3	0.0	

AVEDEL	s 3.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.0
COST	$ 15

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E	(m)	4.30	8.00	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.892 0.75	15 45 75
WB-PROSPCT	1.05	000 826 239 5	1.00	85	0.75 1.892 0.75	15 45 75
SB-SB41OFF	1.09	292 000 000 0	1.00	85	0.75 1.892 0.75	15 45 75
EB-PROSPCT	1.06	000 000 000 5	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	0	1070	292	5	
CAPACITY	veh	1057	2154	472	924	
AVE DELAY	secs	0.0	3.5	83.4	3.8	
MAX DELAY	secs	0.0	6.7	198.5	5.0	
AVE QUEUE	veh	0.0	1.1	6.8	0.0	
MAX QUEUE	veh	0.0	1.6	15.8	0.0	

AVEDEL	s 20.6
LOS SIG	C
LOS UNSIG	C
VEHIC HRS	7.8
COST	$ 117

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E	(m)	4.30	8.00	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
WB-PROSPCT	1.05	000 708 297 5	1.00	85	0.75 1.465 0.75	15 45 75
SB-SB41OFF	1.01	138 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
EB-PROSPCT	1.04	000 0000 000 5	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	0	1010	138	5	
CAPACITY	veh	1057	2154	543	910	
AVE DELAY	secs	0.0	3.2	9.7	3.9	
MAX DELAY	secs	0.0	5.1	17.0	5.0	
AVE QUEUE	veh	0.0	0.9	0.4	0.0	
MAX QUEUE	veh	0.0	1.2	0.6	0.0	

AVEDEL	s 4.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST	$ 19

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E	(m)	8.00	4.30	8.00		TIME PERIOD	min	90		
L'	(m)	25.00	25.00	25.00		TIME SLICE	min	15		
V	(m)	7.31	3.65	7.31		RESULTS PERIOD	min	15 75		
RAD	(m)	25.00	25.00	25.00		TIME COST	$/hr	15.00		
PHI	(d)	25.00	25.00	25.00		FLOW PERIOD	min	15 75		
DIA	(m)	50.00	50.00	50.00		FLOW TYPE	pcu/veh	VEH		
GRAD SEP		0	0	0		FLOW PEAK	am/op/pm	AM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-PROSPCT	1.02	109 1045 5	1.00	50	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 0	1.00	50	0.75 1.538 0.75	15 45 75
EB-PROSPCT	1.04	403 433 5	1.00	50	0.75 1.538 0.75	15 45 75

FLOW	veh	1159	0	841		AVEDEL	s	3.5
CAPACITY	veh	2083	729	2374		LOS SIG		A
AVE DELAY	secs	4.3	0.0	2.3		LOS UNSIG		A
MAX DELAY	secs	7.7	0.0	3.7				
AVE QUEUE	veh	1.4	0.0	0.6		VEHIC HRS		1.9
MAX QUEUE	veh	2.1	0.0	0.7		COST	$	29

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E (m)	8.00	4.30	8.00		
L' (m)	25.00	25.00	25.00		
V (m)	7.31	3.65	7.31		
RAD (m)	25.00	25.00	25.00		
PHI (d)	25.00	25.00	25.00		
DIA (m)	50.00	50.00	50.00		
GRAD SEP	0	0	0		

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-PROSPCT	1.03	139 998 5	1.00	50	0.75 0.830 0.75	15 45 75
SB-NB41ON	1.01	000 000 0	1.00	50	0.75 0.830 0.75	15 45 75
EB-PROSPCT	1.02	596 713 0	1.00	50	0.75 0.830 0.75	15 45 75

FLOW veh	1142	0	1309	
CAPACITY veh	1862	752	2420	
AVE DELAY secs	4.9	0.0	3.2	
MAX DELAY secs	5.5	0.0	3.5	
AVE QUEUE veh	1.6	0.0	1.2	
MAX QUEUE veh	1.7	0.0	1.2	

AVEDEL s	4.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.7
COST $	41

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E	(m)	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	
GRAD SEP		0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-PROSPCT	1.02	109 1045 5	1.00	85	0.75 1.538 0.75	15 45 75
SB-NB41ON	1.01	000 000 0	1.00	85	0.75 1.538 0.75	15 45 75
EB-PROSPCT	1.04	403 433 5	1.00	85	0.75 1.538 0.75	15 45 75

FLOW	veh	1159	0	841	
CAPACITY	veh	1880	524	2174	
AVE DELAY	secs	5.9	0.0	2.7	
MAX DELAY	secs	11.0	0.0	4.3	
AVE QUEUE	veh	1.9	0.0	0.6	
MAX QUEUE	veh	2.9	0.0	0.8	

AVEDEL s	4.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.5
COST $	38

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E	(m)	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	
V	(m)	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	
GRAD SEP		0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
WB-PROSPCT	1.03	139 998 5	1.00	85	0.75 0.830 0.75	15 45 75
SB-NB41ON	1.01	000 000 0	1.00	85	0.75 0.830 0.75	15 45 75
EB-PROSPCT	1.02	596 713 0	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	1142	0	1309	
CAPACITY	veh	1661	547	2217	
AVE DELAY	secs	6.8	0.0	3.9	
MAX DELAY	secs	7.8	0.0	4.3	
AVE QUEUE	veh	2.2	0.0	1.4	
MAX QUEUE	veh	2.4	0.0	1.5	

AVEDEL	s 5.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.6
COST	$ 54

E	(m)	4.30	8.00	4.30			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	3.65	3.65			
RAD	(m)	25.00	25.00	25.00			
PHI	(d)	25.00	25.00	25.00			
DIA	(m)	50.00	50.00	50.00			
GRAD SEP		0	0	0			

TIME PERIOD	min	90								
TIME SLICE	min	15								
RESULTS PERIOD	min	15	75							
TIME COST	$/hr	15.00								
FLOW PERIOD	min	15	75							
FLOW TYPE	pcu/veh	VEH								
FLOW PEAK	am/op/pm	AM								

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.02	089	216	5	1.00	50	0.75	1.398	0.75	15	45	75
WB-PROSPCT	1.01	974	000	5	1.00	50	0.75	1.398	0.75	15	45	75
EB-PROSPCT	1.03	000	402	5	1.00	50	0.75	1.398	0.75	15	45	75

FLOW	veh	310	979	407	AVEDEL	s	4.4
CAPACITY	veh	1070	1832	1279	LOS	SIG	A
AVE DELAY	secs	4.7	4.4	4.1	LOS	UNSIG	A
MAX DELAY	secs	7.2	7.2	6.0			
AVE QUEUE	veh	0.4	1.2	0.5	VEHIC	HRS	2.1
MAX QUEUE	veh	0.5	1.7	0.6	COST	$	31

21:3:11 YEAR 2020 CTH BB/41NB Off-2LN* 49

E (m)	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00
V (m)	3.65	3.65	3.65
RAD (m)	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.02	103 186 5	1.00	50	0.75 1.335 0.75	15 45 75
WB-PROSPCT	1.03	952 000 5	1.00	50	0.75 1.335 0.75	15 45 75
EB-PROSPCT	1.02	000 596 5	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	294	957	601
CAPACITY	veh	967	1816	1291
AVE DELAY	secs	5.4	4.3	5.2
MAX DELAY	secs	8.2	6.8	7.9
AVE QUEUE	veh	0.5	1.2	0.9
MAX QUEUE	veh	0.6	1.5	1.1

AVEDEL s	4.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.4
COST $	37

21:3:11 YEAR 2020 CTH BB/41NB Off-2LN* 50

E	(m)	4.30	8.00	4.30					
L'	(m)	25.00	25.00	25.00					
V	(m)	3.65	3.65	3.65					
RAD	(m)	25.00	25.00	25.00					
PHI	(d)	25.00	25.00	25.00					
DIA	(m)	50.00	50.00	50.00					
GRAD SEP		0	0	0					

TIME PERIOD					min				90		
TIME SLICE					min				15		
RESULTS PERIOD					min	15			75		
TIME COST					$/hr				15.00		
FLOW PERIOD					min	15			75		
FLOW TYPE					pcu/veh				VEH		
FLOW PEAK					am/op/pm				AM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.02	089	216	5	1.00	85	0.75	1.398	0.75	15	45	75
WB-PROSPCT	1.01	974	000	5	1.00	85	0.75	1.398	0.75	15	45	75
EB-PROSPCT	1.03	000	402	5	1.00	85	0.75	1.398	0.75	15	45	75

FLOW	veh	310	979	407					
CAPACITY	veh	867	1627	1078					
AVE DELAY	secs	6.5	6.0	5.3					
MAX DELAY	secs	10.2	10.2	8.0					
AVE QUEUE	veh	0.6	1.7	0.6					
MAX QUEUE	veh	0.7	2.4	0.8					

AVEDEL	s							5.9	
LOS	SIG							A	
LOS	UNSIG							A	
VEHIC	HRS							2.8	
COST	$							42	

E	(m)	4.30	8.00	4.30			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	3.65	3.65			
RAD	(m)	25.00	25.00	25.00			
PHI	(d)	25.00	25.00	25.00			
DIA	(m)	50.00	50.00	50.00			
GRAD SEP		0	0	0			

TIME PERIOD					min			90		
TIME SLICE					min			15		
RESULTS PERIOD					min	15	75			
TIME COST					$/hr			15.00		
FLOW PERIOD					min	15	75			
FLOW TYPE					pcu/veh			VEH		
FLOW PEAK					am/op/pm			PM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.02	103	186	5	1.00	85	0.75	1.335	0.75	15	45	75
WB-PROSPCT	1.03	952	000	5	1.00	85	0.75	1.335	0.75	15	45	75
EB-PROSPCT	1.02	000	596	5	1.00	85	0.75	1.335	0.75	15	45	75

FLOW	veh	294	957	601		AVEDEL	s	6.6
CAPACITY	veh	764	1615	1088		LOS	SIG	A
AVE DELAY	secs	7.8	5.7	7.5		LOS	UNSIG	A
MAX DELAY	secs	12.4	9.4	11.8				
AVE QUEUE	veh	0.7	1.6	1.3		VEHIC	HRS	3.4
MAX QUEUE	veh	0.9	2.1	1.7		COST	$	51

E (m)	4.30	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.276 0.75	15 45 75
WB-WNCHSTR	1.09	000 300 184 5	1.00	50	0.75 1.276 0.75	15 45 75
SB-SB41OFF	1.03	419 000 353 5	1.00	50	0.75 1.276 0.75	15 45 75
EB-WNCHSTR	1.02	250 338 000 5	1.00	50	0.75 1.276 0.75	15 45 75

FLOW	veh	0	489	777	593
CAPACITY	veh	919	2261	2002	1994
AVE DELAY	secs	0.0	2.0	2.9	2.5
MAX DELAY	secs	0.0	2.7	4.4	3.7
AVE QUEUE	veh	0.0	0.3	0.7	0.4
MAX QUEUE	veh	0.0	0.3	0.8	0.5

AVEDEL	s 2.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST	$ 20

E	(m)	4.30	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	25.00	25.00	25.00	25.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 0.996 0.75	15 45 75
WB-WNCHSTR	1.06	000 353 107 5	1.00	50	0.75 0.996 0.75	15 45 75
SB-SB41OFF	1.07	148 000 183 5	1.00	50	0.75 0.996 0.75	15 45 75
EB-WNCHSTR	1.01	248 532 000 5	1.00	50	0.75 0.996 0.75	15 45 75

FLOW	veh	0	465	336	785	AVEDEL s	2.3
CAPACITY	veh	906	2325	1956	2206	LOS SIG	A
AVE DELAY	secs	0.0	1.9	2.2	2.5	LOS UNSIG	A
MAX DELAY	secs	0.0	2.3	2.6	3.1		
AVE QUEUE	veh	0.0	0.3	0.2	0.6	VEHIC HRS	1.0
MAX QUEUE	veh	0.0	0.3	0.2	0.6	COST $	15

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75 1.276 0.75	15 45 75
WB-WNCHSTR	1.09	000	300	184	5	1.00	85	0.75 1.276 0.75	15 45 75
SB-SB41OFF	1.03	419	000	353	5	1.00	85	0.75 1.276 0.75	15 45 75
EB-WNCHSTR	1.02	250	338	000	5	1.00	85	0.75 1.276 0.75	15 45 75

FLOW	veh	0	489	777	593
CAPACITY	veh	714	2071	1801	1791
AVE DELAY	secs	0.0	2.2	3.5	3.0
MAX DELAY	secs	0.0	3.1	5.4	4.4
AVE QUEUE	veh	0.0	0.3	0.8	0.5
MAX QUEUE	veh	0.0	0.4	1.0	0.6

AVEDEL	s 3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.6
COST	$ 23

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 0.996 0.75	15 45 75
WB-WNCHSTR	1.06	000 353 107 5	1.00	85	0.75 0.996 0.75	15 45 75
SB-SB41OFF	1.07	148 000 183 5	1.00	85	0.75 0.996 0.75	15 45 75
EB-WNCHSTR	1.01	248 532 000 5	1.00	85	0.75 0.996 0.75	15 45 75

FLOW	veh	0	465	336	785
CAPACITY	veh	701	2130	1762	2001
AVE DELAY	secs	0.0	2.1	2.5	2.9
MAX DELAY	secs	0.0	2.5	3.0	3.6
AVE QUEUE	veh	0.0	0.3	0.2	0.6
MAX QUEUE	veh	0.0	0.3	0.3	0.7

AVEDEL	s 2.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST	$ 17

E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	50.00	50.00	50.00	50.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.16	168 000 244 5	1.00	50	0.75 1.465 0.75	15 45 75
WB-WNCHSTR	1.11	344 207 000 5	1.00	50	0.75 1.465 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
EB-WNCHSTR	1.04	000 516 175 5	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	417	556	0	696
CAPACITY	veh	798	1901	1024	2369
AVE DELAY	secs	10.5	2.6	0.0	2.1
MAX DELAY	secs	19.1	4.2	0.0	3.2
AVE QUEUE	veh	1.3	0.4	0.0	0.4
MAX QUEUE	veh	1.9	0.5	0.0	0.5

AVEDEL	s 4.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST	$ 31

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E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	50.00	50.00	50.00	50.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	256	000	225	5	1.00	50	0.75 0.802 0.75	15 45 75
WB-WNCHSTR	1.03	780	279	000	5	1.00	50	0.75 0.802 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	50	0.75 0.802 0.75	15 45 75
EB-WNCHSTR	1.04	000	348	360	5	1.00	50	0.75 0.802 0.75	15 45 75

FLOW	veh	486	1064	0	713
CAPACITY	veh	848	1935	1015	2370
AVE DELAY	secs	9.7	4.1	0.0	2.2
MAX DELAY	secs	10.6	4.4	0.0	2.3
AVE QUEUE	veh	1.3	1.2	0.0	0.4
MAX QUEUE	veh	1.4	1.3	0.0	0.4

AVEDEL	s 4.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.9
COST	$ 44

E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.16	168 000 244 5	1.00	85	0.75 1.465 0.75	15 45 75
WB-WNCHSTR	1.11	344 207 000 5	1.00	85	0.75 1.465 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
EB-WNCHSTR	1.04	000 516 175 5	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	417	556	0	696	
CAPACITY	veh	619	1714	819	2170	
AVE DELAY	secs	26.3	3.1	0.0	2.4	
MAX DELAY	secs	53.8	4.9	0.0	3.7	
AVE QUEUE	veh	3.1	0.5	0.0	0.5	
MAX QUEUE	veh	5.5	0.6	0.0	0.6	

AVEDEL	s 8.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.0
COST	$ 60

E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	256 000 225 5	1.00	85	0.75 0.802 0.75	15 45 75
WB-WNCHSTR	1.03	780 279 000 5	1.00	85	0.75 0.802 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 0.802 0.75	15 45 75
EB-WNCHSTR	1.04	000 348 360 5	1.00	85	0.75 0.802 0.75	15 45 75

FLOW	veh	486	1064	0	713	
CAPACITY	veh	656	1735	810	2170	
AVE DELAY	secs	20.0	5.3	0.0	2.5	
MAX DELAY	secs	22.8	5.7	0.0	2.6	
AVE QUEUE	veh	2.8	1.6	0.0	0.5	
MAX QUEUE	veh	3.0	1.7	0.0	0.5	

AVEDEL	s 7.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	4.7
COST	$ 71

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E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD min	90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE min	15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD min	15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST $/hr	15.00
PHI	(d)	25.00	25.00	25.00	25.00	FLOW PERIOD min	15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE pcu/veh	VEH
GRAD SEP		0	0	0	0	FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.02	026 155 269 5	1.00	50	0.75 1.123 0.75	15 45 75
WB-WNCHSTR	1.12	044 125 038 5	1.00	50	0.75 1.123 0.75	15 45 75
SB-GRN BAY	1.12	194 144 016 5	1.00	50	0.75 1.123 0.75	15 45 75
EB-WNCHSTR	1.06	257 218 282 5	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	455	212	359	762	AVEDEL s	2.4
CAPACITY	veh	2002	1699	1885	2161	LOS SIG	A
AVE DELAY	secs	2.3	2.4	2.3	2.5	LOS UNSIG	A
MAX DELAY	secs	3.0	3.1	3.0	3.4		
AVE QUEUE	veh	0.3	0.1	0.2	0.5	VEHIC HRS	1.2
MAX QUEUE	veh	0.3	0.2	0.3	0.6	COST $	18

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E (m)	8.00	8.00	8.00	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	7.31	7.31	7.31	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	034	136	513	5	1.00	50	0.75 0.924 0.75	15 45 75
WB-WNCHSTR	1.03	009	225	023	5	1.00	50	0.75 0.924 0.75	15 45 75
SB-GRN BAY	1.07	297	174	031	5	1.00	50	0.75 0.924 0.75	15 45 75
EB-WNCHSTR	1.09	188	184	286	5	1.00	50	0.75 0.924 0.75	15 45 75

FLOW	veh	688	262	507	663
CAPACITY	veh	2024	1673	1748	2087
AVE DELAY	secs	2.7	2.5	2.9	2.5
MAX DELAY	secs	3.1	2.9	3.4	2.9
AVE QUEUE	veh	0.5	0.2	0.4	0.5
MAX QUEUE	veh	0.6	0.2	0.4	0.5

AVEDEL s	2.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.6
COST $	23

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.02	026	155	269	5	1.00	85	0.75 1.123 0.75	15 45 75
WB-WNCHSTR	1.12	044	125	038	5	1.00	85	0.75 1.123 0.75	15 45 75
SB-GRN BAY	1.12	194	144	016	5	1.00	85	0.75 1.123 0.75	15 45 75
EB-WNCHSTR	1.06	257	218	282	5	1.00	85	0.75 1.123 0.75	15 45 75

FLOW	veh	455	212	359	762
CAPACITY	veh	1799	1514	1701	1966
AVE DELAY	secs	2.6	2.7	2.6	2.9
MAX DELAY	secs	3.5	3.6	3.4	4.0
AVE QUEUE	veh	0.3	0.2	0.3	0.6
MAX QUEUE	veh	0.4	0.2	0.3	0.8

AVEDEL	s 2.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.4
COST	$ 21

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	034	136	513	5	1.00	85	0.75 0.924 0.75	15 45 75
WB-WNCHSTR	1.03	009	225	023	5	1.00	85	0.75 0.924 0.75	15 45 75
SB-GRN BAY	1.07	297	174	031	5	1.00	85	0.75 0.924 0.75	15 45 75
EB-WNCHSTR	1.09	188	184	286	5	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	688	262	507	663
CAPACITY	veh	1819	1472	1555	1897
AVE DELAY	secs	3.1	2.9	3.4	2.9
MAX DELAY	secs	3.7	3.4	4.0	3.3
AVE QUEUE	veh	0.6	0.2	0.5	0.5
MAX QUEUE	veh	0.7	0.2	0.5	0.6

AVEDEL	s 3.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST	$ 27

21:3:11 YEAR 2035 CTH BB/NICOLET-NB BYP* 156

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	25.00	25.00	25.00	25.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	000 123 093 5	1.00	50	0.75 1.398 0.75	15 45 75
WB-PROSPCT	1.20	056 636 709 5	1.00	50	0.75 1.398 0.75	15 45 75
SB-NICOLET	1.01	160 359 125 5	1.00	50	0.75 1.398 0.75	15 45 75
EB-PROSPCT	1.17	185 552 049 5	1.00	50	0.75 1.398 0.75	15 45 75

FLOW	veh	221	1406	649	791	AVEDEL s	10.4
CAPACITY	veh	1792	1874	1146	1230	LOS SIG	B
AVE DELAY	secs	2.3	10.4	11.2	12.1	LOS UNSIG	B
MAX DELAY	secs	3.4	20.3	23.1	24.7		
AVE QUEUE	veh	0.1	4.2	2.1	2.7	VEHIC HRS	8.9
MAX QUEUE	veh	0.2	6.8	3.6	4.7	COST $	133

21:3:11 YEAR 2035 CTH BB/NICOLET-NB BYP* 157

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	25.00	25.00	25.00	25.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	000 346 147 5	1.00	50	0.75 1.335 0.75	15 45 75
WB-PROSPCT	1.03	099 475 466 5	1.00	50	0.75 1.335 0.75	15 45 75
SB-NICOLET	1.01	049 171 105 5	1.00	50	0.75 1.335 0.75	15 45 75
EB-PROSPCT	1.01	207 878 159 5	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	498	1045	330	1249	AVEDEL s	5.2
CAPACITY	veh	1551	1898	1592	1864	LOS SIG	A
AVE DELAY	secs	3.5	4.5	2.9	7.2	LOS UNSIG	A
MAX DELAY	secs	5.6	7.5	4.4	13.1		
AVE QUEUE	veh	0.5	1.3	0.3	2.6	VEHIC HRS	4.5
MAX QUEUE	veh	0.7	1.9	0.3	3.9	COST $	68

21:3:11 YEAR 2035 CTH BB/NICOLET-NB BYP* 158

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	000 123 093 5	1.00	85	0.75 1.398 0.75	15 45 75
WB-PROSPCT	1.20	056 636 709 5	1.00	85	0.75 1.398 0.75	15 45 75
SB-NICOLET	1.01	160 359 125 5	1.00	85	0.75 1.398 0.75	15 45 75
EB-PROSPCT	1.17	185 552 049 5	1.00	85	0.75 1.398 0.75	15 45 75

FLOW	veh	221	1406	649	791	
CAPACITY	veh	1589	1701	941	1053	
AVE DELAY	secs	2.6	23.4	38.5	32.1	
MAX DELAY	secs	3.9	52.5	95.9	76.1	
AVE QUEUE	veh	0.2	9.3	7.0	7.2	
MAX QUEUE	veh	0.2	18.3	16.2	15.3	

AVEDEL	s 27.3
LOS SIG	C
LOS UNSIG	D
VEHIC HRS	23.3
COST	$ 349

21:3:11 YEAR 2035 CTH BB/NICOLET-NB BYP* 159

E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	25.00	25.00	25.00	25.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NICOLET	1.02	000 346 147 5	1.00	85	0.75 1.335 0.75	15 45 75
WB-PROSPCT	1.03	099 475 466 5	1.00	85	0.75 1.335 0.75	15 45 75
SB-NICOLET	1.01	049 171 105 5	1.00	85	0.75 1.335 0.75	15 45 75
EB-PROSPCT	1.01	207 878 159 5	1.00	85	0.75 1.335 0.75	15 45 75

FLOW	veh	498	1045	330	1249	AVEDEL s	8.6
CAPACITY	veh	1348	1697	1387	1659	LOS SIG	A
AVE DELAY	secs	4.4	6.2	3.4	13.7	LOS UNSIG	A
MAX DELAY	secs	7.2	10.9	5.4	28.1		
AVE QUEUE	veh	0.6	1.9	0.3	4.9	VEHIC HRS	7.5
MAX QUEUE	veh	0.9	2.7	0.4	8.6	COST $	113

21:3:11 YEAR 2035 CTH BB/41SB Ramp-EB/SB Byp* 86

E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.00	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	53.00	53.00	53.00	53.00		
GRAD SEP		0	0	0	0		

TIME PERIOD					min	90				
TIME SLICE					min	15				
RESULTS PERIOD					min	15	75			
TIME COST					$/hr	15.00				
FLOW PERIOD					min	15	75			
FLOW TYPE					pcu/veh			VEH		
FLOW PEAK					am/op/pm			AM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-SB41ON	1.01	000	000	000	0	1.00	50	0.75	1.892	0.75	15	45	75
WB-PROSPCT	1.05	000	938	257	5	1.00	50	0.75	1.892	0.75	15	45	75
SB-SB41OFF	1.09	000	000	086	5	1.00	50	0.75	1.892	0.75	15	45	75
EB-PROSPCT	1.06	000	865	000	5	1.00	50	0.75	1.892	0.75	15	45	75

FLOW	veh	0	1200	91	870		AVEDEL	s	3.5
CAPACITY	veh	735	2347	596	2069		LOS	SIG	A
AVE DELAY	secs	0.0	3.4	8.2	3.2		LOS	UNSIG	A
MAX DELAY	secs	0.0	6.5	16.3	6.0				
AVE QUEUE	veh	0.0	1.2	0.2	0.8		VEHIC	HRS	2.1
MAX QUEUE	veh	0.0	1.7	0.3	1.1		COST	$	31

21:3:11 YEAR 2035 CTH BB/41SB Ramp-EB/SB Byp* 87

E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.00	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	53.00	53.00	53.00	53.00		
GRAD SEP		0	0	0	0		

TIME PERIOD					min	90				
TIME SLICE					min	15				
RESULTS PERIOD					min	15	75			
TIME COST					$/hr	15.00				
FLOW PERIOD					min	15	75			
FLOW TYPE					pcu/veh			VEH		
FLOW PEAK					am/op/pm			PM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-SB41ON	1.01	000	000	000	0	1.00	50	0.75	1.465	0.75	15	45	75
WB-PROSPCT	1.05	000	869	335	5	1.00	50	0.75	1.465	0.75	15	45	75
SB-SB41OFF	1.01	000	000	071	5	1.00	50	0.75	1.465	0.75	15	45	75
EB-PROSPCT	1.04	000	1426	000	5	1.00	50	0.75	1.465	0.75	15	45	75

FLOW	veh	0	1209	76	1431
CAPACITY	veh	453	2347	638	2067
AVE DELAY	secs	0.0	3.2	6.7	7.2
MAX DELAY	secs	0.0	5.3	11.3	13.9
AVE QUEUE	veh	0.0	1.1	0.1	2.9
MAX QUEUE	veh	0.0	1.5	0.2	4.7

AVEDEL	s	5.4	
LOS SIG		A	
LOS UNSIG		A	
VEHIC HRS		4.1	
COST	$	61	

21:3:11 YEAR 2035 CTH BB/41SB Ramp-EB/SB Byp* 88

E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.00	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	53.00	53.00	53.00	53.00		
GRAD SEP		0	0	0	0		

TIME PERIOD					min	90				
TIME SLICE					min	15				
RESULTS PERIOD					min	15	75			
TIME COST					$/hr	15.00				
FLOW PERIOD					min	15	75			
FLOW TYPE					pcu/veh			VEH		
FLOW PEAK					am/op/pm			AM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75	1.892	0.75	15	45	75
WB-PROSPCT	1.05	000	938	257	5	1.00	85	0.75	1.892	0.75	15	45	75
SB-SB41OFF	1.09	000	000	086	5	1.00	85	0.75	1.892	0.75	15	45	75
EB-PROSPCT	1.06	000	865	000	5	1.00	85	0.75	1.892	0.75	15	45	75

FLOW	veh	0	1200	91	870		AVEDEL	s	4.6
CAPACITY	veh	530	2150	406	1874		LOS	SIG	A
AVE DELAY	secs	0.0	4.2	16.3	3.9		LOS	UNSIG	A
MAX DELAY	secs	0.0	8.3	35.2	7.6				
AVE QUEUE	veh	0.0	1.5	0.4	1.0		VEHIC	HRS	2.8
MAX QUEUE	veh	0.0	2.2	0.7	1.4		COST	$	41

21:3:11 YEAR 2035 CTH BB/41SB Ramp-EB/SB Byp* 89

E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.00	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	53.00	53.00	53.00	53.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
WB-PROSPCT	1.05	000 869 335 5	1.00	85	0.75 1.465 0.75	15 45 75
SB-SB41OFF	1.01	000 000 071 5	1.00	85	0.75 1.465 0.75	15 45 75
EB-PROSPCT	1.04	000 1426 000 5	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	0	1209	76	1431
CAPACITY	veh	248	2150	433	1868
AVE DELAY	secs	0.0	4.0	11.6	13.6
MAX DELAY	secs	0.0	6.7	21.0	28.9
AVE QUEUE	veh	0.0	1.4	0.3	5.5
MAX QUEUE	veh	0.0	1.9	0.4	9.8

AVEDEL s	9.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	7.0
COST $	105

21:3:11 YEAR 2035 CTH BB/41SB Ramp-EB semi* 65

E	(m)	4.30	8.00	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.892 0.75	15 45 75
WB-PROSPCT	1.05	000	000	257	5	1.00	50	0.75 1.892 0.75	15 45 75
SB-SB41OFF	1.09	000	000	086	5	1.00	50	0.75 1.892 0.75	15 45 75
EB-PROSPCT	1.06	204	000	000	0	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	0	262	91	204
CAPACITY	veh	1214	2351	1079	1060
AVE DELAY	secs	0.0	1.7	3.5	4.2
MAX DELAY	secs	0.0	2.8	6.1	7.4
AVE QUEUE	veh	0.0	0.1	0.1	0.2
MAX QUEUE	veh	0.0	0.2	0.1	0.3

AVEDEL	s 2.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.4
COST	$ 7

21:3:11 YEAR 2035 CTH BB/41SB Ramp-EB semi* 66

E	(m)	4.30	8.00	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90		
TIME SLICE	min	15		
RESULTS PERIOD	min	15	75	
TIME COST	$/hr	15.00		
FLOW PERIOD	min	15	75	
FLOW TYPE	pcu/veh	VEH		
FLOW PEAK	am/op/pm	PM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
WB-PROSPCT	1.05	000 000 335 5	1.00	50	0.75 1.465 0.75	15 45 75
SB-SB41OFF	1.01	000 000 071 5	1.00	50	0.75 1.465 0.75	15 45 75
EB-PROSPCT	1.04	482 0000 000 0	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	0	340	76	482	
CAPACITY	veh	1225	2351	1121	1050	
AVE DELAY	secs	0.0	1.7	3.4	6.6	
MAX DELAY	secs	0.0	2.6	5.0	11.0	
AVE QUEUE	veh	0.0	0.2	0.1	0.9	
MAX QUEUE	veh	0.0	0.2	0.1	1.2	

AVEDEL	s	4.5
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		1.1
COST	$	17

21:3:11 YEAR 2035 CTH BB/41SB Ramp-EB semi* 67

E	(m)	4.30	8.00	4.30	4.30		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.00	7.31	3.65	3.65		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	53.00	53.00	53.00	53.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75 1.892 0.75	15 45 75
WB-PROSPCT	1.05	000	000	257	5	1.00	85	0.75 1.892 0.75	15 45 75
SB-SB41OFF	1.09	000	000	086	5	1.00	85	0.75 1.892 0.75	15 45 75
EB-PROSPCT	1.06	204	000	000	0	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	0	262	91	204
CAPACITY	veh	1009	2154	889	865
AVE DELAY	secs	0.0	1.9	4.4	5.5
MAX DELAY	secs	0.0	3.1	7.6	9.9
AVE QUEUE	veh	0.0	0.1	0.1	0.3
MAX QUEUE	veh	0.0	0.2	0.1	0.4

AVEDEL s	3.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.6
COST $	8

21:3:11 YEAR 2035 CTH BB/41SB Ramp-EB semi* 68

E	(m)	4.30	8.00	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	3.65	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	PM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75	1.465	0.75	15	45	75
WB-PROSPCT	1.05	000	000	335	5	1.00	85	0.75	1.465	0.75	15	45	75
SB-SB41OFF	1.01	000	000	071	5	1.00	85	0.75	1.465	0.75	15	45	75
EB-PROSPCT	1.04	482	0000	000	0	1.00	85	0.75	1.465	0.75	15	45	75

FLOW	veh	0	340	76	482
CAPACITY	veh	1020	2154	917	851
AVE DELAY	secs	0.0	1.9	4.2	10.8
MAX DELAY	secs	0.0	2.9	6.3	19.2
AVE QUEUE	veh	0.0	0.2	0.1	1.5
MAX QUEUE	veh	0.0	0.2	0.1	2.2

AVEDEL	s	6.9
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		1.7
COST	$	26

21:3:11 YEAR 2035 CTH BB/41SB Ramp-SB dual semi* 80

E	(m)	4.30	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.00	7.31	3.65	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	25.00	25.00	25.00	25.00	FLOW PERIOD	min 15 75
DIA	(m)	53.00	53.00	53.00	53.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.892 0.75	15 45 75
WB-PROSPCT	1.05	000	938	257	5	1.00	50	0.75 1.892 0.75	15 45 75
SB-SB41OFF	1.09	329	000	000	0	1.00	50	0.75 1.892 0.75	15 45 75
EB-PROSPCT	1.06	000	000	000	5	1.00	50	0.75 1.892 0.75	15 45 75

FLOW	veh	0	1200	329	5	AVEDEL s	3.8
CAPACITY	veh	1262	2351	1075	2139	LOS SIG	A
AVE DELAY	secs	0.0	3.4	5.6	1.6	LOS UNSIG	A
MAX DELAY	secs	0.0	6.5	11.3	2.7		
AVE QUEUE	veh	0.0	1.2	0.5	0.0	VEHIC HRS	1.6
MAX QUEUE	veh	0.0	1.7	0.8	0.0	COST $	25

21:3:11 YEAR 2035 CTH BB/41SB Ramp-SB dual semi* 81

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.465 0.75	15 45 75
WB-PROSPCT	1.05	000	869	335	5	1.00	50	0.75 1.465 0.75	15 45 75
SB-SB41OFF	1.01	173	000	000	0	1.00	50	0.75 1.465 0.75	15 45 75
EB-PROSPCT	1.04	000	0000	000	5	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	0	1209	173	5
CAPACITY	veh	1262	2351	1154	2122
AVE DELAY	secs	0.0	3.2	3.7	1.7
MAX DELAY	secs	0.0	5.3	6.1	2.4
AVE QUEUE	veh	0.0	1.1	0.2	0.0
MAX QUEUE	veh	0.0	1.5	0.2	0.0

AVEDEL	s 3.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST	$ 19

21:3:11 YEAR 2035 CTH BB/41SB Ramp-SB dual semi* 82

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75 1.892 0.75	15 45 75
WB-PROSPCT	1.05	000	938	257	5	1.00	85	0.75 1.892 0.75	15 45 75
SB-SB41OFF	1.09	329	000	000	0	1.00	85	0.75 1.892 0.75	15 45 75
EB-PROSPCT	1.06	000	000	000	5	1.00	85	0.75 1.892 0.75	15 45 75

FLOW	veh	0	1200	329	5
CAPACITY	veh	1057	2154	886	1944
AVE DELAY	secs	0.0	4.2	8.5	1.8
MAX DELAY	secs	0.0	8.3	18.0	3.0
AVE QUEUE	veh	0.0	1.4	0.8	0.0
MAX QUEUE	veh	0.0	2.1	1.3	0.0

AVEDEL s	5.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.2
COST $	33

21:3:11 YEAR 2035 CTH BB/41SB Ramp-SB dual semi* 83

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.00	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	53.00	53.00	53.00	53.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75 1.465 0.75	15 45 75
WB-PROSPCT	1.05	000	869	335	5	1.00	85	0.75 1.465 0.75	15 45 75
SB-SB41OFF	1.01	173	000	000	0	1.00	85	0.75 1.465 0.75	15 45 75
EB-PROSPCT	1.04	000	0000	000	5	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	0	1209	173	5
CAPACITY	veh	1057	2154	950	1923
AVE DELAY	secs	0.0	4.0	4.8	1.8
MAX DELAY	secs	0.0	6.7	8.2	2.7
AVE QUEUE	veh	0.0	1.4	0.2	0.0
MAX QUEUE	veh	0.0	1.9	0.3	0.0

AVEDEL	s 4.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.6
COST	$ 24

21:3:11 YEAR 2035 CTH BB/41 NB ON-2LN* 60

E	(m)	8.00	4.30	8.00							
L'	(m)	25.00	25.00	25.00							
V	(m)	7.31	3.65	7.31							
RAD	(m)	25.00	25.00	25.00							
PHI	(d)	25.00	25.00	25.00							
DIA	(m)	50.00	50.00	50.00							
GRAD SEP		0	0	0							

TIME PERIOD					min					90	
TIME SLICE					min					15	
RESULTS PERIOD					min	15				75	
TIME COST					$/hr	15.00					
FLOW PERIOD					min	15				75	
FLOW TYPE					pcu/veh					VEH	
FLOW PEAK					am/op/pm					AM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO			FLOW TIME		
WB-PROSPCT	1.02	114	1165	5	1.00	50	0.75	1.538	0.75	15	45	75
SB-NB41ON	1.01	000	000	0	1.00	50	0.75	1.538	0.75	15	45	75
EB-PROSPCT	1.04	459	436	5	1.00	50	0.75	1.538	0.75	15	45	75

FLOW	veh	1284	0	900							
CAPACITY	veh	2081	663	2374							
AVE DELAY	secs	5.3	0.0	2.4							
MAX DELAY	secs	9.9	0.0	3.9							
AVE QUEUE	veh	1.9	0.0	0.6							
MAX QUEUE	veh	2.9	0.0	0.8							

AVEDEL	s									4.1	
LOS	SIG									A	
LOS	UNSIG									A	
VEHIC HRS										2.5	
COST	$									37	

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|                                                                              |
|  21:3:11              YEAR 2035 CTH BB/41 NB ON-2LN*                   61   |
|                                                                              |
|------------------------------------------------------------------------------|
|                                                  |                           |
| E    (m)    8.00   4.30   8.00                   | TIME PERIOD     min    90 |
| L'   (m)   25.00  25.00  25.00                   | TIME SLICE      min    15 |
| V    (m)    7.31   3.65   7.31                   | RESULTS PERIOD  min 15 75 |
| RAD  (m)   25.00  25.00  25.00                   | TIME COST      $/hr 15.00 |
| PHI  (d)   25.00  25.00  25.00                   | FLOW PERIOD     min 15 75 |
| DIA  (m)   50.00  50.00  50.00                   | FLOW TYPE   pcu/veh   VEH |
| GRAD SEP       0      0      0                  | FLOW PEAK  am/op/pm    PM |
|                                                  |                           |
|------------------------------------------------------------------------------|
| LEG NAME |PCU | TURNS (1st exit, 2nd..U)   |FLOF|CL|  FLOW RATIO   |FLOW TIME|
|          |    |                            |    |  |               |         |
|WB-PROSPCT|1.03|  139  998    5             |1.00|50|0.75 0.830 0.75|15 45 75 |
|SB-NB41ON |1.01|  000  000    0             |1.00|50|0.75 0.830 0.75|15 45 75 |
|EB-PROSPCT|1.02|  596  713    0             |1.00|50|0.75 0.830 0.75|15 45 75 |
|          |    |                            |    |  |               |         |
|          |    |                            |    |  |               |         |
|          |    |                            |    |  |               |         |
|          |    |                            |    |  |               |         |
|------------------------------------------------------------------------------|
|                                                        |                     |
| FLOW        veh    1142      0   1309                 | AVEDEL  s   4.0     |
| CAPACITY    veh    1862    752   2420                 | LOS   SIG     A     |
| AVE DELAY  secs     4.9    0.0    3.2                 | LOS UNSIG     A     |
| MAX DELAY  secs     5.5    0.0    3.5                 |                     |
| AVE QUEUE   veh     1.6    0.0    1.2                 | VEHIC HRS   2.7     |
| MAX QUEUE   veh     1.7    0.0    1.2                 | COST    $    41     |
|                                                        |                     |
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21:3:11 YEAR 2035 CTH BB/41 NB ON-2LN* 62

E	(m)	8.00	4.30	8.00							
L'	(m)	25.00	25.00	25.00							
V	(m)	7.31	3.65	7.31							
RAD	(m)	25.00	25.00	25.00							
PHI	(d)	25.00	25.00	25.00							
DIA	(m)	50.00	50.00	50.00							
GRAD SEP		0	0	0							

TIME PERIOD					min					90	
TIME SLICE					min					15	
RESULTS PERIOD					min	15				75	
TIME COST					$/hr	15.00					
FLOW PERIOD					min	15				75	
FLOW TYPE					pcu/veh					VEH	
FLOW PEAK					am/op/pm					AM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO			FLOW TIME		
WB-PROSPCT	1.02	114	1165	5	1.00	85	0.75	1.538	0.75	15	45	75
SB-NB41ON	1.01	000	000	0	1.00	85	0.75	1.538	0.75	15	45	75
EB-PROSPCT	1.04	459	436	5	1.00	85	0.75	1.538	0.75	15	45	75

FLOW	veh	1284	0	900							
CAPACITY	veh	1878	458	2174							
AVE DELAY	secs	8.0	0.0	2.8							
MAX DELAY	secs	16.1	0.0	4.6							
AVE QUEUE	veh	2.9	0.0	0.7							
MAX QUEUE	veh	4.8	0.0	0.9							

AVEDEL	s									5.9	
LOS	SIG									A	
LOS	UNSIG									A	
VEHIC HRS										3.6	
COST	$									54	

21:3:11 YEAR 2035 CTH BB/41 NB ON-2LN* 63

E (m)	8.00	4.30	8.00		
L' (m)	25.00	25.00	25.00		
V (m)	7.31	3.65	7.31		
RAD (m)	25.00	25.00	25.00		
PHI (d)	25.00	25.00	25.00		
DIA (m)	50.00	50.00	50.00		
GRAD SEP	0	0	0		

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO	FLOW TIME
WB-PROSPCT	1.03	139	998	5	1.00	85	0.75 0.830 0.75	15 45 75
SB-NB41ON	1.01	000	000	0	1.00	85	0.75 0.830 0.75	15 45 75
EB-PROSPCT	1.02	596	713	0	1.00	85	0.75 0.830 0.75	15 45 75

FLOW	veh	1142	0	1309	AVEDEL s	5.2
CAPACITY	veh	1661	547	2217	LOS SIG	A
AVE DELAY	secs	6.8	0.0	3.9	LOS UNSIG	A
MAX DELAY	secs	7.8	0.0	4.3		
AVE QUEUE	veh	2.2	0.0	1.4	VEHIC HRS	3.6
MAX QUEUE	veh	2.4	0.0	1.5	COST $	54

21:3:11 YEAR 2035 CTH BB/41 NB OFF-2LN* 54

E (m)	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00
V (m)	3.65	3.65	3.65
RAD (m)	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.02	100 243 5	1.00	50	0.75 1.398 0.75	15 45 75
WB-PROSPCT	1.01	1086 000 5	1.00	50	0.75 1.398 0.75	15 45 75
EB-PROSPCT	1.03	000 459 5	1.00	50	0.75 1.398 0.75	15 45 75

FLOW	veh	348	1091	464
CAPACITY	veh	1039	1813	1279
AVE DELAY	secs	5.2	5.4	4.4
MAX DELAY	secs	8.2	9.1	6.6
AVE QUEUE	veh	0.5	1.7	0.6
MAX QUEUE	veh	0.7	2.4	0.7

AVEDEL s	5.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.7
COST $	40

21:3:11 YEAR 2035 CTH BB/41 NB OFF-2LN* 55

E (m)	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00
V (m)	3.65	3.65	3.65
RAD (m)	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00
GRAD SEP	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.02	116	210	5	1.00	50	0.75 1.335 0.75	15 45 75
WB-PROSPCT	1.03	1023	000	5	1.00	50	0.75 1.335 0.75	15 45 75
EB-PROSPCT	1.02	000	786	5	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	331	1028	791
CAPACITY	veh	863	1800	1291
AVE DELAY	secs	7.0	4.8	7.5
MAX DELAY	secs	11.2	7.8	12.1
AVE QUEUE	veh	0.7	1.4	1.7
MAX QUEUE	veh	0.9	1.9	2.3

AVEDEL s	6.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.7
COST $	55

21:3:11 YEAR 2035 CTH BB/41 NB OFF-2LN* 56

E (m)	4.30	8.00	4.30
L' (m)	25.00	25.00	25.00
V (m)	3.65	3.65	3.65
RAD (m)	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00
GRAD SEP	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.02	100	243	5	1.00	85	0.75 1.398 0.75	15 45 75
WB-PROSPCT	1.01	1086	000	5	1.00	85	0.75 1.398 0.75	15 45 75
EB-PROSPCT	1.03	000	459	5	1.00	85	0.75 1.398 0.75	15 45 75

FLOW	veh	348	1091	464
CAPACITY	veh	836	1609	1078
AVE DELAY	secs	7.6	8.1	5.8
MAX DELAY	secs	12.3	14.6	9.0
AVE QUEUE	veh	0.8	2.5	0.8
MAX QUEUE	veh	1.0	3.8	1.0

AVEDEL s	7.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.9
COST $	59

21:3:11 YEAR 2035 CTH BB/41 NB OFF-2LN* 57

E	(m)	4.30	8.00	4.30			
L'	(m)	25.00	25.00	25.00			
V	(m)	3.65	3.65	3.65			
RAD	(m)	25.00	25.00	25.00			
PHI	(d)	25.00	25.00	25.00			
DIA	(m)	50.00	50.00	50.00			
GRAD SEP		0	0	0			

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)			FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.02	116	210	5	1.00	85	0.75 1.335 0.75	15 45 75
WB-PROSPCT	1.03	1023	000	5	1.00	85	0.75 1.335 0.75	15 45 75
EB-PROSPCT	1.02	000	786	5	1.00	85	0.75 1.335 0.75	15 45 75

FLOW	veh	331	1028	791	AVEDEL	s 10.1
CAPACITY	veh	660	1599	1088	LOS SIG	B
AVE DELAY	secs	12.0	6.8	13.6	LOS UNSIG	B
MAX DELAY	secs	20.9	11.6	24.3		
AVE QUEUE	veh	1.1	2.0	3.1	VEHIC HRS	6.1
MAX QUEUE	veh	1.7	2.9	4.6	COST $	91

21:3:11 YEAR 2035 CTH II/SB 41 RAMP-SB 2LN* 81

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	50	0.75 1.276 0.75	15 45 75
WB-WNCHSTR	1.09	000	340	207	5	1.00	50	0.75 1.276 0.75	15 45 75
SB-SB41OFF	1.03	550	000	407	5	1.00	50	0.75 1.276 0.75	15 45 75
EB-WNCHSTR	1.02	338	376	000	5	1.00	50	0.75 1.276 0.75	15 45 75

FLOW	veh	0	552	962	719
CAPACITY	veh	868	2261	1550	1934
AVE DELAY	secs	0.0	2.1	6.7	3.0
MAX DELAY	secs	0.0	2.9	11.2	4.4
AVE QUEUE	veh	0.0	0.3	1.8	0.6
MAX QUEUE	veh	0.0	0.4	2.6	0.8

AVEDEL	s 4.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.7
COST	$ 40

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min		90
TIME SLICE	min		15
RESULTS PERIOD	min	15	75
TIME COST	$/hr		15.00
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh		VEH
FLOW PEAK	am/op/pm		PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-SB41ON	1.01	000	000	000	0	1.00	50	0.75	0.996	0.75	15	45	75
WB-WNCHSTR	1.06	000	398	139	5	1.00	50	0.75	0.996	0.75	15	45	75
SB-SB41OFF	1.07	155	000	199	5	1.00	50	0.75	0.996	0.75	15	45	75
EB-WNCHSTR	1.01	279	719	000	5	1.00	50	0.75	0.996	0.75	15	45	75

FLOW	veh	0	542	359	1003
CAPACITY	veh	794	2325	1509	2168
AVE DELAY	secs	0.0	2.0	3.1	3.0
MAX DELAY	secs	0.0	2.4	3.8	3.8
AVE QUEUE	veh	0.0	0.3	0.3	0.9
MAX QUEUE	veh	0.0	0.3	0.3	1.0

AVEDEL	s	2.8
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		1.5
COST	$	22

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E	(m)	4.30	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	7.31	3.65	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	25.00	25.00	25.00	25.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75 1.276 0.75	15 45 75
WB-WNCHSTR	1.09	000	340	207	5	1.00	85	0.75 1.276 0.75	15 45 75
SB-SB41OFF	1.03	550	000	407	5	1.00	85	0.75 1.276 0.75	15 45 75
EB-WNCHSTR	1.02	338	376	000	5	1.00	85	0.75 1.276 0.75	15 45 75

FLOW	veh	0	552	962	719	AVEDEL	s 6.7
CAPACITY	veh	663	2071	1349	1731	LOS SIG	A
AVE DELAY	secs	0.0	2.3	11.5	3.6	LOS UNSIG	A
MAX DELAY	secs	0.0	3.2	21.0	5.5		
AVE QUEUE	veh	0.0	0.4	3.2	0.7	VEHIC HRS	4.1
MAX QUEUE	veh	0.0	0.4	5.0	0.9	COST	$ 62

E	(m)	4.30	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	PM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-SB41ON	1.01	000	000	000	0	1.00	85	0.75	0.996	0.75	15	45	75
WB-WNCHSTR	1.06	000	398	139	5	1.00	85	0.75	0.996	0.75	15	45	75
SB-SB41OFF	1.07	155	000	199	5	1.00	85	0.75	0.996	0.75	15	45	75
EB-WNCHSTR	1.01	279	719	000	5	1.00	85	0.75	0.996	0.75	15	45	75

FLOW	veh	0	542	359	1003	
CAPACITY	veh	590	2130	1316	1963	
AVE DELAY	secs	0.0	2.2	3.7	3.7	
MAX DELAY	secs	0.0	2.7	4.6	4.7	
AVE QUEUE	veh	0.0	0.3	0.4	1.1	
MAX QUEUE	veh	0.0	0.4	0.4	1.2	

AVEDEL	s	3.3
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		1.7
COST	$	26

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E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	50.00	50.00	50.00	50.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	AM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.16	000	000	255	5	1.00	50	0.75	1.465	0.75	15	45	75
WB-WNCHSTR	1.11	000	257	000	5	1.00	50	0.75	1.465	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	0	1.00	50	0.75	1.465	0.75	15	45	75
EB-WNCHSTR	1.04	000	622	196	5	1.00	50	0.75	1.465	0.75	15	45	75

FLOW	veh	260	262	0	823		
CAPACITY	veh	736	1877	987	2369		
AVE DELAY	secs	7.9	2.2	0.0	2.3		
MAX DELAY	secs	13.5	3.3	0.0	3.6		
AVE QUEUE	veh	0.6	0.2	0.0	0.5		
MAX QUEUE	veh	0.8	0.2	0.0	0.7		

AVEDEL	s	3.4
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		1.3
COST	$	19

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E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	50.00	50.00	50.00	50.00		
GRAD SEP		0	0	0	0		

TIME PERIOD					min	90			
TIME SLICE					min	15			
RESULTS PERIOD					min	15	75		
TIME COST					$/hr	15.00			
FLOW PERIOD					min	15	75		
FLOW TYPE					pcu/veh			VEH	
FLOW PEAK					am/op/pm			PM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.08	000	000	254	5	1.00	50	0.75	0.802	0.75	15	45	75
WB-WNCHSTR	1.03	000	314	000	5	1.00	50	0.75	0.802	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	0	1.00	50	0.75	0.802	0.75	15	45	75
EB-WNCHSTR	1.04	000	560	405	5	1.00	50	0.75	0.802	0.75	15	45	75

FLOW	veh	259	319	0	970	AVEDEL	s	3.4
CAPACITY	veh	713	1878	979	2370	LOS	SIG	A
AVE DELAY	secs	7.8	2.3	0.0	2.6	LOS	UNSIG	A
MAX DELAY	secs	8.4	2.4	0.0	2.7			
AVE QUEUE	veh	0.6	0.2	0.0	0.7	VEHIC	HRS	1.5
MAX QUEUE	veh	0.6	0.2	0.0	0.7	COST	$	22

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E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	50.00	50.00	50.00	50.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	AM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.16	000	000	255	5	1.00	85	0.75	1.465	0.75	15	45	75
WB-WNCHSTR	1.11	000	257	000	5	1.00	85	0.75	1.465	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	0	1.00	85	0.75	1.465	0.75	15	45	75
EB-WNCHSTR	1.04	000	622	196	5	1.00	85	0.75	1.465	0.75	15	45	75

FLOW	veh	260	262	0	823		
CAPACITY	veh	557	1690	782	2170		
AVE DELAY	secs	14.0	2.5	0.0	2.7		
MAX DELAY	secs	25.7	3.8	0.0	4.1		
AVE QUEUE	veh	1.0	0.2	0.0	0.6		
MAX QUEUE	veh	1.6	0.2	0.0	0.8		

AVEDEL	s	4.8
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		1.8
COST	$	27

E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	000	000	254	5	1.00	85	0.75 0.802 0.75	15 45 75
WB-WNCHSTR	1.03	000	314	000	5	1.00	85	0.75 0.802 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	85	0.75 0.802 0.75	15 45 75
EB-WNCHSTR	1.04	000	560	405	5	1.00	85	0.75 0.802 0.75	15 45 75

FLOW	veh	259	319	0	970
CAPACITY	veh	521	1677	774	2170
AVE DELAY	secs	13.4	2.6	0.0	3.0
MAX DELAY	secs	14.7	2.8	0.0	3.1
AVE QUEUE	veh	1.0	0.2	0.0	0.8
MAX QUEUE	veh	1.0	0.2	0.0	0.8

AVEDEL	s 4.6
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST	$ 30

E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.16	171 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
WB-WNCHSTR	1.11	000 000 000 5	1.00	50	0.75 1.465 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	50	0.75 1.465 0.75	15 45 75
EB-WNCHSTR	1.04	000 622 196 5	1.00	50	0.75 1.465 0.75	15 45 75

FLOW	veh	171	5	0	823
CAPACITY	veh	736	2084	1304	2373
AVE DELAY	secs	6.4	1.7	0.0	2.3
MAX DELAY	secs	10.6	2.4	0.0	3.5
AVE QUEUE	veh	0.3	0.0	0.0	0.5
MAX QUEUE	veh	0.4	0.0	0.0	0.7

AVEDEL s	3.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST $	12

E	(m)	4.30	8.00	4.30	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	7.31	3.65	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	PM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-NB41OFF	1.08	289	000	000	0	1.00	50	0.75	0.802	0.75	15	45	75
WB-WNCHSTR	1.03	000	000	000	5	1.00	50	0.75	0.802	0.75	15	45	75
SB-NB41ON	1.01	000	000	000	0	1.00	50	0.75	0.802	0.75	15	45	75
EB-WNCHSTR	1.04	000	560	405	5	1.00	50	0.75	0.802	0.75	15	45	75

FLOW	veh	289	5	0	970	
CAPACITY	veh	713	2085	1304	2373	
AVE DELAY	secs	8.3	1.7	0.0	2.5	
MAX DELAY	secs	9.0	1.8	0.0	2.7	
AVE QUEUE	veh	0.7	0.0	0.0	0.7	
MAX QUEUE	veh	0.7	0.0	0.0	0.7	

AVEDEL	s	3.9
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		1.4
COST	$	20

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E (m)	4.30	8.00	4.30	8.00
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	7.31	3.65	7.31
RAD (m)	25.00	25.00	25.00	25.00
PHI (d)	25.00	25.00	25.00	25.00
DIA (m)	50.00	50.00	50.00	50.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.16	171 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
WB-WNCHSTR	1.11	000 000 000 5	1.00	85	0.75 1.465 0.75	15 45 75
SB-NB41ON	1.01	000 000 000 0	1.00	85	0.75 1.465 0.75	15 45 75
EB-WNCHSTR	1.04	000 622 196 5	1.00	85	0.75 1.465 0.75	15 45 75

FLOW	veh	171	5	0	823
CAPACITY	veh	557	1897	1099	2174
AVE DELAY	secs	9.9	1.9	0.0	2.6
MAX DELAY	secs	16.9	2.7	0.0	4.1
AVE QUEUE	veh	0.5	0.0	0.0	0.6
MAX QUEUE	veh	0.7	0.0	0.0	0.8

AVEDEL	s 3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST	$ 16

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E	(m)	4.30	8.00	4.30	8.00		
L'	(m)	25.00	25.00	25.00	25.00		
V	(m)	3.65	7.31	3.65	7.31		
RAD	(m)	25.00	25.00	25.00	25.00		
PHI	(d)	25.00	25.00	25.00	25.00		
DIA	(m)	50.00	50.00	50.00	50.00		
GRAD SEP		0	0	0	0		

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-NB41OFF	1.08	289	000	000	0	1.00	85	0.75 0.802 0.75	15 45 75
WB-WNCHSTR	1.03	000	000	000	5	1.00	85	0.75 0.802 0.75	15 45 75
SB-NB41ON	1.01	000	000	000	0	1.00	85	0.75 0.802 0.75	15 45 75
EB-WNCHSTR	1.04	000	560	405	5	1.00	85	0.75 0.802 0.75	15 45 75

FLOW	veh	289	5	0	970
CAPACITY	veh	521	1884	1099	2174
AVE DELAY	secs	15.0	1.9	0.0	3.0
MAX DELAY	secs	16.6	2.0	0.0	3.1
AVE QUEUE	veh	1.2	0.0	0.0	0.8
MAX QUEUE	veh	1.3	0.0	0.0	0.8

AVEDEL	s 5.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST	$ 30

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E	(m)	8.00	8.00	8.00	8.00	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	7.31	7.31	7.31	7.31	RESULTS PERIOD	min 15 75
RAD	(m)	25.00	25.00	25.00	25.00	TIME COST	$/hr 15.00
PHI	(d)	25.00	25.00	25.00	25.00	FLOW PERIOD	min 15 75
DIA	(m)	50.00	50.00	50.00	50.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.02	045 318 292 5	1.00	50	0.75 1.123 0.75	15 45 75
WB-WNCHSTR	1.12	049 141 174 5	1.00	50	0.75 1.123 0.75	15 45 75
SB-GRN BAY	1.12	219 348 018 5	1.00	50	0.75 1.123 0.75	15 45 75
EB-WNCHSTR	1.06	342 220 313 5	1.00	50	0.75 1.123 0.75	15 45 75

FLOW	veh	660	369	590	880	AVEDEL s	3.1
CAPACITY	veh	1974	1547	1754	1886	LOS SIG	A
AVE DELAY	secs	2.7	3.0	3.1	3.6	LOS UNSIG	A
MAX DELAY	secs	3.6	4.1	4.1	5.0		
AVE QUEUE	veh	0.5	0.3	0.5	0.9	VEHIC HRS	2.2
MAX QUEUE	veh	0.6	0.4	0.6	1.1	COST $	33

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD					min				90	
TIME SLICE					min				15	
RESULTS PERIOD					min	15			75	
TIME COST					$/hr	15.00				
FLOW PERIOD					min	15			75	
FLOW TYPE					pcu/veh				VEH	
FLOW PEAK					am/op/pm				PM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-GRN BAY	1.01	164	222	578	5	1.00	50	0.75	0.924	0.75	15	45	75
WB-WNCHSTR	1.03	011	259	030	5	1.00	50	0.75	0.924	0.75	15	45	75
SB-GRN BAY	1.07	335	346	035	5	1.00	50	0.75	0.924	0.75	15	45	75
EB-WNCHSTR	1.09	268	251	322	5	1.00	50	0.75	0.924	0.75	15	45	75

FLOW	veh	969	305	721	846
CAPACITY	veh	1936	1531	1671	1951
AVE DELAY	secs	3.7	2.9	3.7	3.2
MAX DELAY	secs	4.5	3.4	4.5	3.8
AVE QUEUE	veh	1.0	0.2	0.8	0.8
MAX QUEUE	veh	1.1	0.3	0.9	0.8

AVEDEL	s	3.5	
LOS SIG		A	
LOS UNSIG		A	
VEHIC HRS		2.7	
COST	$	41	

21:3:11 YEAR 2035 CTH II/GREEN BAY-2LN* 40

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	AM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB-GRN BAY	1.02	045	318	292	5	1.00	85	0.75	1.123	0.75	15	45	75
WB-WNCHSTR	1.12	049	141	174	5	1.00	85	0.75	1.123	0.75	15	45	75
SB-GRN BAY	1.12	219	348	018	5	1.00	85	0.75	1.123	0.75	15	45	75
EB-WNCHSTR	1.06	342	220	313	5	1.00	85	0.75	1.123	0.75	15	45	75

FLOW	veh	660	369	590	880
CAPACITY	veh	1771	1362	1569	1690
AVE DELAY	secs	3.2	3.6	3.6	4.5
MAX DELAY	secs	4.4	4.9	5.0	6.4
AVE QUEUE	veh	0.6	0.4	0.6	1.1
MAX QUEUE	veh	0.7	0.5	0.7	1.4

AVEDEL	s	3.8
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		2.6
COST	$	40

21:3:11 YEAR 2035 CTH II/GREEN BAY-2LN* 41

E	(m)	8.00	8.00	8.00	8.00	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	7.31	7.31	7.31	7.31	
RAD	(m)	25.00	25.00	25.00	25.00	
PHI	(d)	25.00	25.00	25.00	25.00	
DIA	(m)	50.00	50.00	50.00	50.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB-GRN BAY	1.01	164	222	578	5	1.00	85	0.75 0.924 0.75	15 45 75
WB-WNCHSTR	1.03	011	259	030	5	1.00	85	0.75 0.924 0.75	15 45 75
SB-GRN BAY	1.07	335	346	035	5	1.00	85	0.75 0.924 0.75	15 45 75
EB-WNCHSTR	1.09	268	251	322	5	1.00	85	0.75 0.924 0.75	15 45 75

FLOW	veh	969	305	721	846
CAPACITY	veh	1731	1330	1478	1761
AVE DELAY	secs	4.7	3.5	4.7	3.9
MAX DELAY	secs	5.8	4.1	5.8	4.7
AVE QUEUE	veh	1.3	0.3	1.0	0.9
MAX QUEUE	veh	1.5	0.3	1.1	1.0

AVEDEL	s 4.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.4
COST	$ 51

14:3:11 2020 MID VALLEY DRIVE AND CTH S - 1LN* 30

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB MID DR	1.04	045 005 005 5	1.00	50	0.75 1.170 0.75	15 45 75
WB CTH S	1.04	035 260 015 5	1.00	50	0.75 1.170 0.75	15 45 75
SB MID DR	1.04	015 001 045 5	1.00	50	0.75 1.170 0.75	15 45 75
EB CTH S	1.04	005 350 005 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	60	315	66	365	
CAPACITY	veh	1006	1221	1073	1196	
AVE DELAY	secs	3.7	3.9	3.5	4.2	
MAX DELAY	secs	4.9	5.1	4.6	5.7	
AVE QUEUE	veh	0.1	0.3	0.1	0.4	
MAX QUEUE	veh	0.1	0.4	0.1	0.5	

AVEDEL	s 4.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.9
COST	$ 13

14:3:11 2020 MID VALLEY DRIVE AND CTH S - 1LN* 32

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90
TIME SLICE	min	15
RESULTS PERIOD	min	15 75
TIME COST	$/hr	15.00
FLOW PERIOD	min	15 75
FLOW TYPE	pcu/veh	VEH
FLOW PEAK	am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB MID DR	1.03	045 015 005 5	1.00	50	0.75 0.775 0.75	15 45 75
WB CTH S	1.03	045 390 070 5	1.00	50	0.75 0.775 0.75	15 45 75
SB MID DR	1.03	015 020 046 5	1.00	50	0.75 0.775 0.75	15 45 75
EB CTH S	1.03	015 320 010 5	1.00	50	0.75 0.775 0.75	15 45 75

FLOW	veh	70	510	86	350	
CAPACITY	veh	1031	1225	982	1166	
AVE DELAY	secs	3.7	5.0	4.0	4.4	
MAX DELAY	secs	3.8	5.1	4.1	4.5	
AVE QUEUE	veh	0.1	0.7	0.1	0.4	
MAX QUEUE	veh	0.1	0.7	0.1	0.4	

AVEDEL	s	4.6
LOS	SIG	A
LOS	UNSIG	A
VEHIC	HRS	1.3
COST	$	20

14:3:11 2020 MID VALLEY DRIVE AND CTH S - 1LN* 33

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB MID DR	1.04	045 005 005 5	1.00	85	0.75 1.170 0.75	15 45 75
WB CTH S	1.04	035 260 015 5	1.00	85	0.75 1.170 0.75	15 45 75
SB MID DR	1.04	015 001 045 5	1.00	85	0.75 1.170 0.75	15 45 75
EB CTH S	1.04	005 350 005 5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	60	315	66	365	
CAPACITY	veh	807	1022	874	997	
AVE DELAY	secs	4.7	5.0	4.4	5.6	
MAX DELAY	secs	6.3	6.7	5.7	7.6	
AVE QUEUE	veh	0.1	0.4	0.1	0.6	
MAX QUEUE	veh	0.1	0.5	0.1	0.7	

AVEDEL s	5.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.2
COST $	17

14:3:11 2020 MID VALLEY DRIVE AND CTH S - 1LN* 34

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB MID DR	1.03	045 015 005 5	1.00	85	0.75 0.775 0.75	15 45 75
WB CTH S	1.03	045 390 070 5	1.00	85	0.75 0.775 0.75	15 45 75
SB MID DR	1.03	015 020 046 5	1.00	85	0.75 0.775 0.75	15 45 75
EB CTH S	1.03	015 320 010 5	1.00	85	0.75 0.775 0.75	15 45 75

FLOW	veh	70	510	86	350	
CAPACITY	veh	830	1024	781	965	
AVE DELAY	secs	4.7	6.9	5.1	5.8	
MAX DELAY	secs	4.8	7.1	5.3	6.0	
AVE QUEUE	veh	0.1	1.0	0.1	0.6	
MAX QUEUE	veh	0.1	1.0	0.1	0.6	

AVEDEL	s 6.2
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST	$ 26

14:3:11 2020 US 41 SB RAMPS AND CTH S - 1 LN* 31

E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41SB ON	1.05	000 000 000 0	1.00	50	0.75 1.335 0.75	15 45 75
WB CTH S	1.05	000 200 175 5	1.00	50	0.75 1.335 0.75	15 45 75
SB 41SBOFF	1.05	115 001 095 5	1.00	50	0.75 1.335 0.75	15 45 75
EB CTH S	1.05	175 265 000 5	1.00	50	0.75 1.335 0.75	15 45 75

FLOW	veh	0	380	216	445	AVEDEL	s 4.9
CAPACITY	veh	1017	1221	1011	1069	LOS SIG	A
AVE DELAY	secs	0.0	4.2	4.5	5.8	LOS UNSIG	A
MAX DELAY	secs	0.0	6.1	6.5	8.8		
AVE QUEUE	veh	0.0	0.5	0.3	0.7	VEHIC HRS	1.4
MAX QUEUE	veh	0.0	0.6	0.3	0.9	COST	$ 21

14:3:11 2020 US 41 SB RAMPS AND CTH S - 1 LN* 32

E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41SB ON	1.03	000 000 000 0	1.00	50	0.75 1.036 0.75	15 45 75
WB CTH S	1.03	000 260 160 5	1.00	50	0.75 1.036 0.75	15 45 75
SB 41SBOFF	1.03	245 001 150 5	1.00	50	0.75 1.036 0.75	15 45 75
EB CTH S	1.03	190 215 000 5	1.00	50	0.75 1.036 0.75	15 45 75

FLOW	veh	0	425	401	410
CAPACITY	veh	1038	1245	1010	1071
AVE DELAY	secs	0.0	4.3	5.8	5.4
MAX DELAY	secs	0.0	5.4	7.5	6.8
AVE QUEUE	veh	0.0	0.5	0.7	0.6
MAX QUEUE	veh	0.0	0.6	0.8	0.7

AVEDEL s	5.1
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST $	26

14:3:11 2020 US 41 SB RAMPS AND CTH S - 1 LN* 33

E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41SB ON	1.05	000 000 000 0	1.00	85	0.75 1.335 0.75	15 45 75
WB CTH S	1.05	000 200 175 5	1.00	85	0.75 1.335 0.75	15 45 75
SB 41SBOFF	1.05	115 001 095 5	1.00	85	0.75 1.335 0.75	15 45 75
EB CTH S	1.05	175 265 000 5	1.00	85	0.75 1.335 0.75	15 45 75

FLOW	veh	0	380	216	445	
CAPACITY	veh	819	1024	814	872	
AVE DELAY	secs	0.0	5.5	6.0	8.6	
MAX DELAY	secs	0.0	8.1	8.9	13.8	
AVE QUEUE	veh	0.0	0.6	0.4	1.1	
MAX QUEUE	veh	0.0	0.7	0.5	1.5	

AVEDEL s	6.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST $	30

14:3:11 2020 US 41 SB RAMPS AND CTH S - 1 LN* 34

E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41SB ON	1.03	000 000 000 0	1.00	85	0.75 1.036 0.75	15 45 75
WB CTH S	1.03	000 260 160 5	1.00	85	0.75 1.036 0.75	15 45 75
SB 41SBOFF	1.03	245 001 150 5	1.00	85	0.75 1.036 0.75	15 45 75
EB CTH S	1.03	190 215 000 5	1.00	85	0.75 1.036 0.75	15 45 75

FLOW	veh	0	425	401	410	
CAPACITY	veh	837	1044	809	870	
AVE DELAY	secs	0.0	5.7	8.7	7.7	
MAX DELAY	secs	0.0	7.2	11.7	10.1	
AVE QUEUE	veh	0.0	0.7	1.0	0.9	
MAX QUEUE	veh	0.0	0.8	1.2	1.1	

AVEDEL s	7.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.5
COST $	38

14:3:11 2020 US 41 NB RAMPS AND CTH S - 1 LN* 17

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41NB ON	1.05	105 001 100 5	1.00	50	0.75 1.222 0.75	15 45 75
WB CTH S	1.05	131 275 000 5	1.00	50	0.75 1.222 0.75	15 45 75
SB 41NBOFF	1.05	000 000 000 0	1.00	50	0.75 1.222 0.75	15 45 75
EB CTH S	1.05	000 165 190 5	1.00	50	0.75 1.222 0.75	15 45 75

FLOW	veh	211	411	0	360	
CAPACITY	veh	1022	1058	1008	1221	
AVE DELAY	secs	4.4	5.5	0.0	4.1	
MAX DELAY	secs	6.0	7.9	0.0	5.6	
AVE QUEUE	veh	0.3	0.6	0.0	0.4	
MAX QUEUE	veh	0.3	0.8	0.0	0.5	

AVEDEL s	4.7
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	19

14:3:11 2020 US 41 NB RAMPS AND CTH S - 1 LN* 18

E	(m)	4.30	4.30	4.30	4.30	TIME PERIOD	min 90
L'	(m)	25.00	25.00	25.00	25.00	TIME SLICE	min 15
V	(m)	3.65	3.65	3.65	3.65	RESULTS PERIOD	min 15 75
RAD	(m)	20.00	20.00	20.00	20.00	TIME COST	$/hr 15.00
PHI	(d)	30.00	30.00	30.00	30.00	FLOW PERIOD	min 15 75
DIA	(m)	40.00	40.00	40.00	40.00	FLOW TYPE	pcu/veh VEH
GRAD SEP		0	0	0	0	FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41NB ON	1.04	140 001 160 5	1.00	50	0.75 0.959 0.75	15 45 75
WB CTH S	1.04	100 260 000 5	1.00	50	0.75 0.959 0.75	15 45 75
SB 41NBOFF	1.04	000 000 000 0	1.00	50	0.75 0.959 0.75	15 45 75
EB CTH S	1.04	000 245 115 5	1.00	50	0.75 0.959 0.75	15 45 75

FLOW	veh	306	365	0	365	AVEDEL	s 4.6
CAPACITY	veh	1031	1078	995	1233	LOS SIG	A
AVE DELAY	secs	4.9	5.0	0.0	4.1	LOS UNSIG	A
MAX DELAY	secs	5.8	5.9	0.0	4.8		
AVE QUEUE	veh	0.4	0.5	0.0	0.4	VEHIC HRS	1.3
MAX QUEUE	veh	0.5	0.6	0.0	0.5	COST	$ 20

14:3:11 2020 US 41 NB RAMPS AND CTH S - 1 LN* 19

E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB 41NB ON	1.05	105	001	100	5	1.00	85	0.75 1.222 0.75	15 45 75
WB CTH S	1.05	131	275	000	5	1.00	85	0.75 1.222 0.75	15 45 75
SB 41NBOFF	1.05	000	000	000	0	1.00	85	0.75 1.222 0.75	15 45 75
EB CTH S	1.05	000	165	190	5	1.00	85	0.75 1.222 0.75	15 45 75

FLOW	veh	211	411	0	360
CAPACITY	veh	825	861	811	1024
AVE DELAY	secs	5.8	8.0	0.0	5.3
MAX DELAY	secs	8.1	11.9	0.0	7.4
AVE QUEUE	veh	0.3	0.9	0.0	0.5
MAX QUEUE	veh	0.4	1.2	0.0	0.6

AVEDEL s	6.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST $	27

14:3:11 2020 US 41 NB RAMPS AND CTH S - 1 LN* 20

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41NB ON	1.04	140 001 160 5	1.00	85	0.75 0.959 0.75	15 45 75
WB CTH S	1.04	100 260 000 5	1.00	85	0.75 0.959 0.75	15 45 75
SB 41NBOFF	1.04	000 000 000 0	1.00	85	0.75 0.959 0.75	15 45 75
EB CTH S	1.04	000 245 115 5	1.00	85	0.75 0.959 0.75	15 45 75

FLOW	veh	306	365	0	365	
CAPACITY	veh	832	879	796	1034	
AVE DELAY	secs	6.7	6.9	0.0	5.3	
MAX DELAY	secs	8.2	8.4	0.0	6.3	
AVE QUEUE	veh	0.6	0.7	0.0	0.5	
MAX QUEUE	veh	0.7	0.8	0.0	0.6	

AVEDEL s	6.3
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.8
COST $	27

14:3:11 2020 FRENCH ROAD AND CTH S - 1 LN* 12

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.04	005 001 080 5	1.00	50	0.75 1.616 0.75	15 45 75
WB CTH S	1.04	005 305 015 5	1.00	50	0.75 1.616 0.75	15 45 75
SB FRENCH	1.04	025 001 001 5	1.00	50	0.75 1.616 0.75	15 45 75
EB CTH S	1.04	125 100 035 5	1.00	50	0.75 1.616 0.75	15 45 75

FLOW	veh	91	330	32	265	
CAPACITY	veh	1154	1165	1006	1220	
AVE DELAY	secs	3.3	4.3	3.6	3.7	
MAX DELAY	secs	5.1	6.9	5.7	5.8	
AVE QUEUE	veh	0.1	0.4	0.0	0.3	
MAX QUEUE	veh	0.1	0.5	0.0	0.3	

AVEDEL	s 3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.8
COST	$ 12

14:3:11 2020 FRENCH ROAD AND CTH S - 1 LN* 13

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.03	005 005 100 5	1.00	50	0.75 1.170 0.75	15 45 75
WB CTH S	1.03	002 220 010 5	1.00	50	0.75 1.170 0.75	15 45 75
SB FRENCH	1.03	040 010 002 5	1.00	50	0.75 1.170 0.75	15 45 75
EB CTH S	1.03	125 240 020 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	115	237	57	390	
CAPACITY	veh	1095	1172	1057	1230	
AVE DELAY	secs	3.6	3.8	3.5	4.2	
MAX DELAY	secs	4.7	5.0	4.6	5.6	
AVE QUEUE	veh	0.1	0.3	0.1	0.5	
MAX QUEUE	veh	0.1	0.3	0.1	0.5	

AVEDEL	s 3.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	0.9
COST	$ 13

14:3:11 2020 FRENCH ROAD AND CTH S - 1 LN* 14

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.04	005 001 080 5	1.00	85	0.75 1.616 0.75	15 45 75
WB CTH S	1.04	005 305 015 5	1.00	85	0.75 1.616 0.75	15 45 75
SB FRENCH	1.04	025 001 001 5	1.00	85	0.75 1.616 0.75	15 45 75
EB CTH S	1.04	125 100 035 5	1.00	85	0.75 1.616 0.75	15 45 75

FLOW	veh	91	330	32	265	
CAPACITY	veh	955	966	807	1021	
AVE DELAY	secs	4.0	5.6	4.5	4.7	
MAX DELAY	secs	6.3	9.3	7.2	7.5	
AVE QUEUE	veh	0.1	0.5	0.0	0.4	
MAX QUEUE	veh	0.1	0.7	0.1	0.4	

AVEDEL	s 5.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.0
COST	$ 15

14:3:11 2020 FRENCH ROAD AND CTH S - 1 LN* 15

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	PM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.03	005 005 100 5	1.00	85	0.75 1.170 0.75	15 45 75
WB CTH S	1.03	002 220 010 5	1.00	85	0.75 1.170 0.75	15 45 75
SB FRENCH	1.03	040 010 002 5	1.00	85	0.75 1.170 0.75	15 45 75
EB CTH S	1.03	125 240 020 5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	115	237	57	390	
CAPACITY	veh	894	971	856	1029	
AVE DELAY	secs	4.5	4.8	4.4	5.5	
MAX DELAY	secs	6.0	6.4	5.8	7.5	
AVE QUEUE	veh	0.1	0.3	0.1	0.6	
MAX QUEUE	veh	0.2	0.4	0.1	0.7	

AVEDEL	s	5.1
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		1.1
COST	$	17

14:3:11 2035 MID VALLEY DRIVE AND CTH S - 1LN* 32

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB MID DR	1.04	080 030 030 5	1.00	50	0.75 1.170 0.75	15 45 75
WB CTH S	1.04	075 295 020 5	1.00	50	0.75 1.170 0.75	15 45 75
SB MID DR	1.04	020 001 080 5	1.00	50	0.75 1.170 0.75	15 45 75
EB CTH S	1.04	005 390 010 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	145	395	106	410	
CAPACITY	veh	961	1191	1037	1173	
AVE DELAY	secs	4.3	4.4	3.8	4.6	
MAX DELAY	secs	5.8	6.0	5.0	6.3	
AVE QUEUE	veh	0.2	0.5	0.1	0.5	
MAX QUEUE	veh	0.2	0.6	0.1	0.6	

AVEDEL s	4.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	19

14:3:11 2035 MID VALLEY DRIVE AND CTH S - 1LN* 33

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB MID DR	1.03	055 040 005 5	1.00	50	0.75 0.775 0.75	15 45 75
WB CTH S	1.03	095 440 080 5	1.00	50	0.75 0.775 0.75	15 45 75
SB MID DR	1.03	020 040 130 5	1.00	50	0.75 0.775 0.75	15 45 75
EB CTH S	1.03	020 360 015 5	1.00	50	0.75 0.775 0.75	15 45 75

FLOW	veh	105	620	195	400	
CAPACITY	veh	959	1208	948	1102	
AVE DELAY	secs	4.2	6.1	4.7	5.1	
MAX DELAY	secs	4.3	6.2	4.9	5.2	
AVE QUEUE	veh	0.1	1.0	0.3	0.6	
MAX QUEUE	veh	0.1	1.1	0.3	0.6	

AVEDEL s	5.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST $	30

14:3:11 2035 MID VALLEY DRIVE AND CTH S - 1LN* 34

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB MID DR	1.04	080 030 030 5	1.00	85	0.75 1.170 0.75	15 45 75
WB CTH S	1.04	075 295 020 5	1.00	85	0.75 1.170 0.75	15 45 75
SB MID DR	1.04	020 001 080 5	1.00	85	0.75 1.170 0.75	15 45 75
EB CTH S	1.04	005 390 010 5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	145	395	106	410	
CAPACITY	veh	762	992	838	974	
AVE DELAY	secs	5.7	5.9	4.8	6.3	
MAX DELAY	secs	7.8	8.1	6.4	8.7	
AVE QUEUE	veh	0.2	0.7	0.1	0.7	
MAX QUEUE	veh	0.3	0.8	0.2	0.9	

AVEDEL	s 5.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.7
COST	$ 26

14:3:11 2035 MID VALLEY DRIVE AND CTH S - 1LN* 35

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB MID DR	1.03	055 040 005 5	1.00	85	0.75 0.775 0.75	15 45 75
WB CTH S	1.03	095 440 080 5	1.00	85	0.75 0.775 0.75	15 45 75
SB MID DR	1.03	020 040 130 5	1.00	85	0.75 0.775 0.75	15 45 75
EB CTH S	1.03	020 360 015 5	1.00	85	0.75 0.775 0.75	15 45 75

FLOW	veh	105	620	195	400	
CAPACITY	veh	758	1007	747	901	
AVE DELAY	secs	5.5	9.1	6.5	7.1	
MAX DELAY	secs	5.6	9.5	6.6	7.3	
AVE QUEUE	veh	0.2	1.6	0.4	0.8	
MAX QUEUE	veh	0.2	1.6	0.4	0.8	

AVEDEL s	7.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.9
COST $	43

14:3:11 2035 US 41 SB RAMPS AND CTH S - 1 LN* 37

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	AM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB 41SB ON	1.05	000	000	000	0	1.00	50	0.75	1.335	0.75	15	45	75
WB CTH S	1.05	000	265	215	5	1.00	50	0.75	1.335	0.75	15	45	75
SB 41SBOFF	1.05	130	001	115	5	1.00	50	0.75	1.335	0.75	15	45	75
EB CTH S	1.05	215	370	000	5	1.00	50	0.75	1.335	0.75	15	45	75

FLOW	veh	0	485	251	590	AVEDEL	s	6.5
CAPACITY	veh	947	1221	952	1036	LOS SIG		A
AVE DELAY	secs	0.0	4.8	5.1	8.5	LOS UNSIG		A
MAX DELAY	secs	0.0	7.2	7.6	14.0			
AVE QUEUE	veh	0.0	0.7	0.4	1.4	VEHIC HRS		2.4
MAX QUEUE	veh	0.0	0.8	0.5	2.0	COST	$	36

14:3:11 2035 US 41 SB RAMPS AND CTH S - 1 LN* 38

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	PM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB 41SB ON	1.03	000	000	000	0	1.00	50	0.75	1.036	0.75	15	45	75
WB CTH S	1.03	000	355	200	5	1.00	50	0.75	1.036	0.75	15	45	75
SB 41SBOFF	1.03	260	001	175	5	1.00	50	0.75	1.036	0.75	15	45	75
EB CTH S	1.03	200	340	000	5	1.00	50	0.75	1.036	0.75	15	45	75

FLOW	veh	0	560	441	545	AVEDEL	s	6.5
CAPACITY	veh	954	1245	934	1034	LOS SIG		A
AVE DELAY	secs	0.0	5.2	7.2	7.3	LOS UNSIG		A
MAX DELAY	secs	0.0	6.6	9.7	9.7			
AVE QUEUE	veh	0.0	0.8	0.9	1.1	VEHIC HRS		2.8
MAX QUEUE	veh	0.0	0.9	1.1	1.4	COST	$	42

14:3:11 2035 US 41 SB RAMPS AND CTH S - 1 LN* 39

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB 41SB ON	1.05	000	000	000	0	1.00	85	0.75 1.335 0.75	15 45 75
WB CTH S	1.05	000	265	215	5	1.00	85	0.75 1.335 0.75	15 45 75
SB 41SBOFF	1.05	130	001	115	5	1.00	85	0.75 1.335 0.75	15 45 75
EB CTH S	1.05	215	370	000	5	1.00	85	0.75 1.335 0.75	15 45 75

FLOW	veh	0	485	251	590	
CAPACITY	veh	750	1024	755	839	
AVE DELAY	secs	0.0	6.6	7.2	17.2	
MAX DELAY	secs	0.0	10.1	11.0	31.7	
AVE QUEUE	veh	0.0	0.9	0.5	2.9	
MAX QUEUE	veh	0.0	1.2	0.7	4.6	

AVEDEL s	11.5
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	4.2
COST $	63

14:3:11 2035 US 41 SB RAMPS AND CTH S - 1 LN* 40

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO	FLOW TIME
NB 41SB ON	1.03	000	000	000	0	1.00	85	0.75 1.036 0.75	15 45 75
WB CTH S	1.03	000	355	200	5	1.00	85	0.75 1.036 0.75	15 45 75
SB 41SBOFF	1.03	260	001	175	5	1.00	85	0.75 1.036 0.75	15 45 75
EB CTH S	1.03	200	340	000	5	1.00	85	0.75 1.036 0.75	15 45 75

FLOW	veh	0	560	441	545
CAPACITY	veh	753	1044	733	833
AVE DELAY	secs	0.0	7.3	12.4	12.5
MAX DELAY	secs	0.0	9.5	17.7	17.9
AVE QUEUE	veh	0.0	1.2	1.6	2.0
MAX QUEUE	veh	0.0	1.4	2.0	2.5

AVEDEL	s 10.6
LOS SIG	B
LOS UNSIG	B
VEHIC HRS	4.5
COST	$ 68

14:3:11 2035 US 41 NB RAMPS AND CTH S - 1 LN* 29

E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41NB ON	1.05	145 001 130 5	1.00	50	0.75 1.222 0.75	15 45 75
WB CTH S	1.05	160 355 000 5	1.00	50	0.75 1.222 0.75	15 45 75
SB 41NBOFF	1.05	000 000 000 0	1.00	50	0.75 1.222 0.75	15 45 75
EB CTH S	1.05	000 230 220 5	1.00	50	0.75 1.222 0.75	15 45 75

FLOW	veh	281	520	0	455	
CAPACITY	veh	969	1024	947	1221	
AVE DELAY	secs	5.2	7.2	0.0	4.6	
MAX DELAY	secs	7.3	10.8	0.0	6.4	
AVE QUEUE	veh	0.4	1.1	0.0	0.6	
MAX QUEUE	veh	0.5	1.4	0.0	0.7	

AVEDEL s	5.8
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.0
COST $	30

14:3:11 2035 US 41 NB RAMPS AND CTH S - 1 LN* 30

E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41NB ON	1.04	165 001 200 5	1.00	50	0.75 0.959 0.75	15 45 75
WB CTH S	1.04	130 360 000 5	1.00	50	0.75 0.959 0.75	15 45 75
SB 41NBOFF	1.04	000 000 000 0	1.00	50	0.75 0.959 0.75	15 45 75
EB CTH S	1.04	000 330 185 5	1.00	50	0.75 0.959 0.75	15 45 75

FLOW	veh	371	495	0	520	
CAPACITY	veh	944	1017	916	1233	
AVE DELAY	secs	6.2	6.8	0.0	5.0	
MAX DELAY	secs	7.6	8.4	0.0	5.9	
AVE QUEUE	veh	0.6	1.0	0.0	0.7	
MAX QUEUE	veh	0.7	1.1	0.0	0.8	

AVEDEL s	5.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	2.3
COST $	34

14:3:11 2035 US 41 NB RAMPS AND CTH S - 1 LN* 31

E (m)	4.30	4.30	4.30	4.30
L' (m)	25.00	25.00	25.00	25.00
V (m)	3.65	3.65	3.65	3.65
RAD (m)	20.00	20.00	20.00	20.00
PHI (d)	30.00	30.00	30.00	30.00
DIA (m)	40.00	40.00	40.00	40.00
GRAD SEP	0	0	0	0

TIME PERIOD min	90
TIME SLICE min	15
RESULTS PERIOD min	15 75
TIME COST $/hr	15.00
FLOW PERIOD min	15 75
FLOW TYPE pcu/veh	VEH
FLOW PEAK am/op/pm	AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB 41NB ON	1.05	145 001 130 5	1.00	85	0.75 1.222 0.75	15 45 75
WB CTH S	1.05	160 355 000 5	1.00	85	0.75 1.222 0.75	15 45 75
SB 41NBOFF	1.05	000 000 000 0	1.00	85	0.75 1.222 0.75	15 45 75
EB CTH S	1.05	000 230 220 5	1.00	85	0.75 1.222 0.75	15 45 75

FLOW	veh	281	520	0	455	
CAPACITY	veh	772	827	750	1024	
AVE DELAY	secs	7.3	12.4	0.0	6.2	
MAX DELAY	secs	10.7	20.0	0.0	8.9	
AVE QUEUE	veh	0.6	1.8	0.0	0.8	
MAX QUEUE	veh	0.7	2.6	0.0	1.0	

AVEDEL s	9.0
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	3.1
COST $	47

14:3:11 2035 US 41 NB RAMPS AND CTH S - 1 LN* 32

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90	
TIME SLICE	min	15	
RESULTS PERIOD	min	15	75
TIME COST	$/hr	15.00	
FLOW PERIOD	min	15	75
FLOW TYPE	pcu/veh	VEH	
FLOW PEAK	am/op/pm	PM	

LEG NAME	PCU	TURNS (1st exit, 2nd..U)				FLOF	CL	FLOW RATIO			FLOW TIME		
NB 41NB ON	1.04	165	001	200	5	1.00	85	0.75	0.959	0.75	15	45	75
WB CTH S	1.04	130	360	000	5	1.00	85	0.75	0.959	0.75	15	45	75
SB 41NBOFF	1.04	000	000	000	0	1.00	85	0.75	0.959	0.75	15	45	75
EB CTH S	1.04	000	330	185	5	1.00	85	0.75	0.959	0.75	15	45	75

FLOW	veh	371	495	0	520	
CAPACITY	veh	745	818	717	1034	
AVE DELAY	secs	9.4	10.9	0.0	6.9	
MAX DELAY	secs	12.0	14.3	0.0	8.4	
AVE QUEUE	veh	1.0	1.5	0.0	1.0	
MAX QUEUE	veh	1.2	1.8	0.0	1.1	

AVEDEL	s	9.0
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		3.5
COST	$	52

14:3:11 2035 FRENCH ROAD AND CTH S - 1 LN* 14

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.04	005 001 115 5	1.00	50	0.75 1.616 0.75	15 45 75
WB CTH S	1.04	005 370 020 5	1.00	50	0.75 1.616 0.75	15 45 75
SB FRENCH	1.04	030 001 001 5	1.00	50	0.75 1.616 0.75	15 45 75
EB CTH S	1.04	170 165 035 5	1.00	50	0.75 1.616 0.75	15 45 75

FLOW	veh	126	400	37	375	
CAPACITY	veh	1117	1145	947	1218	
AVE DELAY	secs	3.5	4.8	3.9	4.2	
MAX DELAY	secs	5.6	8.0	6.2	6.8	
AVE QUEUE	veh	0.1	0.6	0.0	0.5	
MAX QUEUE	veh	0.2	0.7	0.1	0.6	

AVEDEL s	4.4
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.1
COST $	17

14:3:11 2035 FRENCH ROAD AND CTH S - 1 LN* 15

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm PM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.03	005 005 140 5	1.00	50	0.75 1.170 0.75	15 45 75
WB CTH S	1.03	005 300 010 5	1.00	50	0.75 1.170 0.75	15 45 75
SB FRENCH	1.03	050 010 005 5	1.00	50	0.75 1.170 0.75	15 45 75
EB CTH S	1.03	170 290 030 5	1.00	50	0.75 1.170 0.75	15 45 75

FLOW	veh	155	320	70	495	
CAPACITY	veh	1060	1144	990	1228	
AVE DELAY	secs	3.9	4.3	3.8	4.8	
MAX DELAY	secs	5.2	5.8	5.1	6.6	
AVE QUEUE	veh	0.2	0.4	0.1	0.7	
MAX QUEUE	veh	0.2	0.5	0.1	0.8	

AVEDEL s	4.5
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.3
COST $	19

14:3:11 2035 FRENCH ROAD AND CTH S - 1 LN* 16

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min 90
TIME SLICE	min 15
RESULTS PERIOD	min 15 75
TIME COST	$/hr 15.00
FLOW PERIOD	min 15 75
FLOW TYPE	pcu/veh VEH
FLOW PEAK	am/op/pm AM

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.04	005 001 115 5	1.00	85	0.75 1.616 0.75	15 45 75
WB CTH S	1.04	005 370 020 5	1.00	85	0.75 1.616 0.75	15 45 75
SB FRENCH	1.04	030 001 001 5	1.00	85	0.75 1.616 0.75	15 45 75
EB CTH S	1.04	170 165 035 5	1.00	85	0.75 1.616 0.75	15 45 75

FLOW	veh	126	400	37	375	
CAPACITY	veh	918	946	748	1018	
AVE DELAY	secs	4.4	6.7	4.9	5.6	
MAX DELAY	secs	7.0	11.5	8.1	9.2	
AVE QUEUE	veh	0.2	0.8	0.1	0.6	
MAX QUEUE	veh	0.2	1.0	0.1	0.8	

AVEDEL s	5.9
LOS SIG	A
LOS UNSIG	A
VEHIC HRS	1.5
COST $	23

14:3:11 2035 FRENCH ROAD AND CTH S - 1 LN* 17

E	(m)	4.30	4.30	4.30	4.30	
L'	(m)	25.00	25.00	25.00	25.00	
V	(m)	3.65	3.65	3.65	3.65	
RAD	(m)	20.00	20.00	20.00	20.00	
PHI	(d)	30.00	30.00	30.00	30.00	
DIA	(m)	40.00	40.00	40.00	40.00	
GRAD SEP		0	0	0	0	

TIME PERIOD	min	90		
TIME SLICE	min	15		
RESULTS PERIOD	min	15	75	
TIME COST	$/hr	15.00		
FLOW PERIOD	min	15	75	
FLOW TYPE	pcu/veh	VEH		
FLOW PEAK	am/op/pm	PM		

LEG NAME	PCU	TURNS (1st exit, 2nd..U)	FLOF	CL	FLOW RATIO	FLOW TIME
NB FRENCH	1.03	005 005 140 5	1.00	85	0.75 1.170 0.75	15 45 75
WB CTH S	1.03	005 300 010 5	1.00	85	0.75 1.170 0.75	15 45 75
SB FRENCH	1.03	050 010 005 5	1.00	85	0.75 1.170 0.75	15 45 75
EB CTH S	1.03	170 290 030 5	1.00	85	0.75 1.170 0.75	15 45 75

FLOW	veh	155	320	70	495	
CAPACITY	veh	859	943	789	1027	
AVE DELAY	secs	5.0	5.7	4.9	6.7	
MAX DELAY	secs	6.7	7.7	6.6	9.4	
AVE QUEUE	veh	0.2	0.5	0.1	0.9	
MAX QUEUE	veh	0.3	0.6	0.1	1.1	

AVEDEL	s	6.0
LOS SIG		A
LOS UNSIG		A
VEHIC HRS		1.7
COST	$	26

Appendix N

Crash Benefit Analysis

CTH BB Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**5.00**	**19.00**			
Reduced Crashes	**NB Diverge**		0.00	5.00	19.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**13.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	6.00	13.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	6.00	13.00	0.00	0.60	1.30
Reduced Crashes	**NB Merge**		0.00	5.40	11.70	0.00	0.60	1.30
Reduction Benefit			**0**	**4**	**2**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**13.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**12.00**	**30.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	12.00	30.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	12.00	30.00	0.00	1.20	3.00
Reduced Crashes	**SB Merge**		0.00	10.80	27.00	0.00	1.20	3.00
Reduction Benefit			**0**	**8**	**4**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**4.00**			
Reduced Crashes	**NB Ramps**		0.00	1.00	4.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**13.00**			
Reduced Crashes	**SB Ramps**		0.00	7.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**12**	**6**
Total Alternative Reduction Benefit		**18**	

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**5.00**	**19.00**			
Reduced Crashes	**NB Diverge**		0.00	5.00	19.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**13.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	6.00	13.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	6.00	13.00	0.00	0.60	1.30
Reduced Crashes	**NB Merge**		0.00	5.40	11.70	0.00	0.60	1.30
Reduction Benefit			**0**	**4**	**2**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**13.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**12.00**	**30.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	12.00	30.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	12.00	30.00	0.00	1.20	3.00
Reduced Crashes	**SB Merge**		0.00	10.80	27.00	0.00	1.20	3.00
Reduction Benefit			**0**	**8**	**4**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**4.00**			
Other Intersection Geometrics								
Provide Additional Storage for Left turn Lane	X	0.15	0.00	1.00	4.00	0.00	0.15	0.60
Reduced Crashes	**NB Ramps**		0.00	0.85	3.40	0.00	0.15	0.60
Reduction Benefit			**0**	**1**	**1**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**13.00**			
Reduced Crashes	**SB Ramps**		0.00	7.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**13**	**7**
Total Alternative Reduction Benefit		**20**	

CTH BB Alternative 3

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**5.00**	**19.00**			
Reduced Crashes	**NB Diverge**		0.00	5.00	19.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**13.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	6.00	13.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	6.00	13.00	0.00	0.60	1.30
Reduced Crashes	**NB Merge**		0.00	5.40	11.70	0.00	0.60	1.30
Reduction Benefit			**0**	**4**	**2**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**13.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**12.00**	**30.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	12.00	30.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	12.00	30.00	0.00	1.20	3.00
Reduced Crashes	**SB Merge**		0.00	10.80	27.00	0.00	1.20	3.00
Reduction Benefit			**0**	**8**	**4**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**4.00**			
Other								
Realign Roadway	x	0.40	0.00	1.00	4.00	0.00	0.40	1.60
Widen bridge (at least 6 feet)	x		0.00	0.60	2.40	0.00	0.00	0.00
Add additional lanes with median, same alignment	x	0.20	0.00	0.60	2.40	0.00	0.12	0.48
Other Intersection Geometrics								
Provide Additional Storage for Left turn Lane	x	0.15	0.00	0.48	1.92	0.00	0.07	0.29
Reduced Crashes	**NB Ramps**		0.00	0.41	1.63	0.00	0.59	2.37
Reduction Benefit			**0**	**4**	**3**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**13.00**			
Other								
Realign Roadway	x	0.40	0.00	7.00	13.00	0.00	2.80	5.20
Widen bridge (at least 6 feet)	x		0.00	4.20	7.80	0.00	0.00	0.00
Add additional lanes with median, same alignment	X	0.20	0.00	4.20	7.80	0.00	0.84	1.56
Reconstruction (combination and miscellaneous)	X	0.20	0.00	3.36	6.24	0.00	0.67	1.25
Other Intersection Geometrics								
Add Right turn Lane	X	0.25	0.00	2.69	4.99	0.00	0.67	1.25
Reduced Crashes	**SB Ramps**		0.00	2.02	3.74	0.00	4.98	9.26
Reduction Benefit			**0**	**35**	**13**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**51**	**22**
Total Alternative Reduction Benefit		**73**	

CTH BB Alternative 4

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**5.00**	**19.00**			
Reduced Crashes	**NB Diverge**		0.00	5.00	19.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**13.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	6.00	13.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	6.00	13.00	0.00	0.60	1.30
Reduced Crashes	**NB Merge**		0.00	5.40	11.70	0.00	0.60	1.30
Reduction Benefit			**0**	**4**	**2**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**13.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**12.00**	**30.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	12.00	30.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	12.00	30.00	0.00	1.20	3.00
Reduced Crashes	**SB Merge**		0.00	10.80	27.00	0.00	1.20	3.00
Reduction Benefit			**0**	**8**	**4**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**4.00**			
		0.90	0.00	1.00	4.00			
Add Roundabout at Appropriate Locations	x	0.76	0.00	1.00	4.00	0.00	0.76	1.05
		0.38	0.00	1.00	4.00			
Reduced Crashes	**NB Ramps**		0.00	0.24	2.95	0.00	0.76	1.05
Reduction Benefit			**0**	**5**	**1**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**13.00**			
		0.90	0.00	7.00	13.00			
Add Roundabout at Appropriate Locations	x	0.76	0.00	7.00	13.00	0.00	5.32	1.64
		0.38	0.00	7.00	13.00			
Reduced Crashes	**SB Ramps**		0.00	1.68	11.36	0.00	5.32	1.64
Reduction Benefit			**0**	**37**	**2**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**54**	**9**
Total Alternative Reduction Benefit		**63**	

CTH BB Alternative 5

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**5.00**	**19.00**			
Reduced Crashes	**NB Diverge**		0.00	5.00	19.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**13.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	6.00	13.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	6.00	13.00	0.00	0.60	1.30
Reduced Crashes	**NB Merge**		0.00	5.40	11.70	0.00	0.60	1.30
Reduction Benefit			**0**	**4**	**2**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**13.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**12.00**	**30.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	12.00	30.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	12.00	30.00	0.00	1.20	3.00
Reduced Crashes	**SB Merge**		0.00	10.80	27.00	0.00	1.20	3.00
Reduction Benefit			**0**	**8**	**4**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**4.00**			
		0.90	0.00	1.00	4.00			
Add Roundabout at Appropriate Locations	x	0.76	0.00	1.00	4.00	0.00	0.76	1.05
		0.38	0.00	1.00	4.00			
Reduced Crashes	**NB Ramps**		0.00	0.24	2.95	0.00	0.76	1.05
Reduction Benefit			**0**	**5**	**1**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**13.00**			
		0.90	0.00	7.00	13.00			
Add Roundabout at Appropriate Locations	x	0.76	0.00	7.00	13.00	0.00	5.32	1.64
		0.38	0.00	7.00	13.00			
Reduced Crashes	**SB Ramps**		0.00	1.68	11.36	0.00	5.32	1.64
Reduction Benefit			**0**	**37**	**2**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**54**	**9**
Total Alternative Reduction Benefit		**63**	

CTH CE Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**6.00**			
Shoulders								
Flatten side slopes	X	0.20	0.00	2.00	6.00	0.00	0.40	1.20
Reduced Crashes	**NB Diverge**		0.00	1.60	4.80	0.00	0.40	1.20
Reduction Benefit			**0**	**3**	**2**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	4.00	5.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	4.00	5.00	0.00	0.40	0.50
Shoulders								
Flatten side slopes	X	0.20	0.00	3.60	4.50	0.00	0.72	0.90
Reduced Crashes	**NB Merge**		0.00	2.88	3.60	0.00	1.12	1.40
Reduction Benefit			**0**	**8**	**2**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**3.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	3.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	4.00	5.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	4.00	5.00	0.00	0.40	0.50
Reduced Crashes	**SB Merge**		0.00	3.60	4.50	0.00	0.40	0.50
Reduction Benefit			**0**	**3**	**1**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**11.00**	**26.00**			
Horizontal Curve								
Curve correction: radius change only	X	0.10	0.00	11.00	26.00	0.00	1.10	2.60
Other Intersection Geometrics								
Add Right turn Lane	X	0.25	0.00	9.90	23.40	0.00	2.48	5.85
Reduced Crashes	**NB Ramps**		0.00	7.43	17.55	0.00	3.58	8.45
Reduction Benefit			**0**	**25**	**12**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**20.00**	**21.00**			
Other Intersection Geometrics								
Provide Additional Storage for Left turn Lane	X	0.15	0.00	20.00	21.00	0.00	3.00	3.15
Reduced Crashes	**SB Ramps**		0.00	17.00	17.85	0.00	3.00	3.15
Reduction Benefit			**0**	**21**	**4**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**60**	**21**
Total Alternative Reduction Benefit		**81**	

CTH CE Alternative 2

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**6.00**			
Shoulders								
Flatten side slopes	X	0.20	0.00	2.00	6.00	0.00	0.40	1.20
Reduced Crashes	**NB Diverge**		0.00	1.60	4.80	0.00	0.40	1.20
Reduction Benefit			**0**	**3**	**2**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	4.00	5.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	4.00	5.00	0.00	0.40	0.50
Shoulders								
Flatten side slopes	X	0.20	0.00	3.60	4.50	0.00	0.72	0.90
Reduced Crashes	**NB Merge**		0.00	2.88	3.60	0.00	1.12	1.40
Reduction Benefit			**0**	**8**	**2**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**3.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	3.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	4.00	5.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	4.00	5.00	0.00	0.40	0.50
Reduced Crashes	**SB Merge**		0.00	3.60	4.50	0.00	0.40	0.50
Reduction Benefit			**0**	**3**	**1**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**11.00**	**26.00**			
Horizontal Curve								
Curve correction: radius change only	X	0.10	0.00	11.00	26.00	0.00	1.10	2.60
Other								
Realign Roadway	X	0.40	0.00	9.90	23.40	0.00	3.96	9.36
Add additional lanes with median, same alignment	X	0.20	0.00	5.94	14.04	0.00	1.19	2.81
Reconstruction (combination and miscellaneous)	X	0.20	0.00	4.75	11.23	0.00	0.95	2.25
Other Intersection Geometrics								
Add Right turn Lane	X	0.25	0.00	3.80	8.99	0.00	0.95	2.25
Reduced Crashes	**NB Ramps**		0.00	2.85	6.74	0.00	8.15	19.26
Reduction Benefit			**0**	**57**	**27**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**20.00**	**21.00**			
Other								
Reconstruction (combination and miscellaneous)	X	0.20	0.00	20.00	21.00	0.00	4.00	4.20
Other Intersection Geometrics								
Provide Additional Storage for Left turn Lane	X	0.15	0.00	16.00	16.80	0.00	2.40	2.52
Reduced Crashes	**SB Ramps**		0.00	13.60	14.28	0.00	6.40	6.72
Reduction Benefit			**0**	**45**	**9**			

Total Alternative Reduction Benefits	**Fatal**	**Injury**	**PDO**
Total Reduction Benefits	**0**	**116**	**41**
Total Alternative Reduction Benefit		**157**	

CTH CE Alternative 3

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**6.00**			
Reduced Crashes	**NB Diverge**		0.00	2.00	6.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Reduced Crashes	**NB Merge**		0.00	4.00	5.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**3.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	3.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Reduced Crashes	**SB Merge**		0.00	4.00	5.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**11.00**	**26.00**			
Add Roundabout at Appropriate Locations	x	0.76	0.00	11.00	26.00	0.00	8.36	4.70
		0.38	0.00	11.00	26.00			
Reduced Crashes	**NB Ramps**		0.00	2.64	21.30	0.00	8.36	4.70
Reduction Benefit			**0**	**59**	**7**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**20.00**	**21.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	20.00	21.00	0.00	15.20	-1.44
		0.76	0.00	20.00	21.00			
		0.38	0.00	20.00	21.00			
Reduced Crashes	**SB Ramps**		0.00	4.80	22.44	0.00	15.20	-1.44
Reduction Benefit			**0**	**106**	**-2**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**165**	**5**
Total Alternative Reduction Benefit		**170**	

CTH CE Alternative 4

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**6.00**			
Reduced Crashes	**NB Diverge**		0.00	2.00	6.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Reduced Crashes	**NB Merge**		0.00	4.00	5.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**3.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	3.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Reduced Crashes	**SB Merge**		0.00	4.00	5.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**11.00**	**26.00**			
Add Roundabout at Appropriate Locations	x	0.76	0.00	11.00	26.00	0.00	8.36	4.70
		0.38	0.00	11.00	26.00			
Reduced Crashes	**NB Ramps**		0.00	2.64	21.30	0.00	8.36	4.70
Reduction Benefit			**0**	**59**	**7**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**20.00**	**21.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	20.00	21.00	0.00	15.20	-1.44
		0.76	0.00	20.00	21.00			
		0.38	0.00	20.00	21.00			
Reduced Crashes	**SB Ramps**		0.00	4.80	22.44	0.00	15.20	-1.44
Reduction Benefit			**0**	**106**	**-2**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**165**	**5**
Total Alternative Reduction Benefit		**170**	

CTH E Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**4.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	6.00	4.00	0.00	0.00	0.00
Lengthen exit ramp deceleration distance	X	0.10	0.00	6.00	4.00	0.00	0.60	0.40
Reduced Crashes	**NB Diverge**		0.00	5.40	3.60	0.00	0.60	0.40
Reduction Benefit			**0**	**4**	**1**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**9.00**			
Reduced Crashes	**NB Merge**		0.00	4.00	9.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**9.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	9.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**7.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	7.00	7.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	7.00	7.00	0.00	0.70	0.70
Reduced Crashes	**SB Merge**		0.00	6.30	6.30	0.00	0.70	0.70
Reduction Benefit			**0**	**5**	**1**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**12.00**	**24.00**			
Other Intersection Geometrics								
Provide Additional Storage for Left turn Lane	X	0.15	0.00	12.00	24.00	0.00	1.80	3.60
Add Right turn Lane	X	0.25	0.00	10.20	20.40	0.00	2.55	5.10
Reduced Crashes	**NB Ramps**		0.00	7.65	15.30	0.00	4.35	8.70
Reduction Benefit			**0**	**30**	**12**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**12.00**	**29.00**			
Other Intersection Geometrics								
Add Right turn Lane	X	0.25	0.00	12.00	29.00	0.00	3.00	7.25
Reduced Crashes	**SB Ramps**		0.00	9.00	21.75	0.00	3.00	7.25
Reduction Benefit			**0**	**21**	**10**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**60**	**24**
Total Alternative Reduction Benefit		**84**	

CTH E Alternative 2

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**4.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	6.00	4.00	0.00	0.00	0.00
Lengthen exit ramp deceleration distance	X	0.10	0.00	6.00	4.00	0.00	0.60	0.40
Reduced Crashes	**NB Diverge**		0.00	5.40	3.60	0.00	0.60	0.40
Reduction Benefit			**0**	**4**	**1**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**9.00**			
Reduced Crashes	**NB Merge**		0.00	4.00	9.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**9.00**			
Reduced Crashes	**SB Diverge**		0.00	1.00	9.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**7.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	7.00	7.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	7.00	7.00	0.00	0.70	0.70
Reduced Crashes	**SB Merge**		0.00	6.30	6.30	0.00	0.70	0.70
Reduction Benefit			**0**	**5**	**1**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**12.00**	**24.00**			
Other Intersection Geometrics								
Provide Additional Storage for Left turn Lane	X	0.15	0.00	12.00	24.00	0.00	1.80	3.60
Add Right turn Lane	X	0.25	0.00	10.20	20.40	0.00	2.55	5.10
Reduced Crashes	**NB Ramps**		0.00	7.65	15.30	0.00	4.35	8.70
Reduction Benefit			**0**	**30**	**12**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**12.00**	**29.00**			
Other Intersection Geometrics								
Add Right turn Lane	X	0.25	0.00	12.00	29.00	0.00	3.00	7.25
Reduced Crashes	**SB Ramps**		0.00	9.00	21.75	0.00	3.00	7.25
Reduction Benefit			**0**	**21**	**10**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**60**	**24**
Total Alternative Reduction Benefit		**84**	

CTH E Alternative 3

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	6.00	4.00			
Interchanges & Ramp Geometry								
Reduced Crashes	NB Diverge		0.00	6.00	4.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	4.00	9.00			
Reduced Crashes	NB Merge		0.00	4.00	9.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	1.00	9.00			
Reduced Crashes	SB Diverge		0.00	1.00	9.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	7.00	7.00			
Reduced Crashes	SB Merge		0.00	7.00	7.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	12.00	24.00			
Add Roundabout at Appropriate Locations	x	0.90	0.00	12.00	24.00	0.00	9.12	3.47
		0.76	0.00	12.00	24.00			
		0.38	0.00	12.00	24.00			
Reduced Crashes	NB Ramps		0.00	2.88	20.53	0.00	9.12	3.47
Reduction Benefit			0	64	5			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	12.00	29.00			
Add Roundabout at Appropriate Locations	x	0.90	0.00	12.00	29.00	0.00	9.12	5.37
		0.76	0.00	12.00	29.00			
		0.38	0.00	12.00	29.00			
Reduced Crashes	SB Ramps		0.00	2.88	23.63	0.00	9.12	5.37
Reduction Benefit			0	64	8			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	0	128	13
Total Alternative Reduction Benefit		141	

CTH E Alternative 4

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	6.00	4.00			
Interchanges & Ramp Geometry								
Reduced Crashes	NB Diverge		0.00	6.00	4.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	4.00	9.00			
Reduced Crashes	NB Merge		0.00	4.00	9.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	1.00	9.00			
Reduced Crashes	SB Diverge		0.00	1.00	9.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	7.00	7.00			
Reduced Crashes	SB Merge		0.00	7.00	7.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	12.00	24.00			
Add Roundabout at Appropriate Locations	x	0.90	0.00	12.00	24.00	0.00	9.12	3.47
		0.76	0.00	12.00	24.00			
		0.38	0.00	12.00	24.00			
Reduced Crashes	NB Ramps		0.00	2.88	20.53	0.00	9.12	3.47
Reduction Benefit			0	64	5			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	12.00	29.00			
Add Roundabout at Appropriate Locations	x	0.90	0.00	12.00	29.00	0.00	9.12	5.37
		0.76	0.00	12.00	29.00			
		0.38	0.00	12.00	29.00			
Reduced Crashes	SB Ramps		0.00	2.88	23.63	0.00	9.12	5.37
Reduction Benefit			0	64	8			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	0	128	13
Total Alternative Reduction Benefit		141	

CTH II Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**13.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	x	0.20	0.00	7.00	13.00	0.00	1.40	2.60
Reduced Crashes	**NB Diverge**		0.00	5.60	10.40	0.00	1.40	2.60
Reduction Benefit			**0**	**10**	**4**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**15.00**	**20.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	**x**	0.20	0.00	15.00	20.00	0.00	3.00	4.00
Reduced Crashes	**NB Merge**		0.00	12.00	16.00	0.00	3.00	4.00
Reduction Benefit			**0**	**21**	**6**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**19.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	**x**	0.20	0.00	9.00	19.00	0.00	1.80	3.80
Reduced Crashes	**SB Diverge**		0.00	7.20	15.20	0.00	1.80	3.80
Reduction Benefit			**0**	**13**	**5**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**15.00**			
Reduced Crashes	**SB Merge**		0.00	9.00	15.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**8.00**			
Reduced Crashes	**NB Ramps**		0.00	7.00	8.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**7.00**			
Interchanges & Ramp Geometry								
Lengthen exit ramp deceleration distance	x	0.10	0.00	1.00	7.00	0.00	0.10	0.70
Reduced Crashes	**SB Ramps**		0.00	0.57	4.02	0.00	0.43	2.98
Reduction Benefit			**0**	**3**	**4**			

Total Alternative Reduction Benefits	**Fatal**	**Injury**	**PDO**
Total Reduction Benefits	**0**	**47**	**19**
Total Alternative Reduction Benefit		**66**	

CTH II Alternative 2

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**13.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	x	0.20	0.00	7.00	13.00	0.00	1.40	2.60
Reduced Crashes	**NB Diverge**		0.00	5.60	10.40	0.00	1.40	2.60
Reduction Benefit			**0**	**10**	**4**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**15.00**	**20.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	**x**	0.20	0.00	15.00	20.00	0.00	3.00	4.00
Reduced Crashes	**NB Merge**		0.00	12.00	16.00	0.00	3.00	4.00
Reduction Benefit			**0**	**21**	**6**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**19.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	**x**	0.20	0.00	9.00	19.00	0.00	1.80	3.80
Reduced Crashes	**SB Diverge**		0.00	7.20	15.20	0.00	1.80	3.80
Reduction Benefit			**0**	**13**	**5**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**15.00**			
Reduced Crashes	**SB Merge**		0.00	9.00	15.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**8.00**			
Interchanges & Ramp Geometry								
Lengthen entrance ramp acceleration distance	x	0.10	0.00	7.00	8.00	0.00	0.70	0.80
Reduced Crashes	**NB Ramps**		0.00	6.30	7.20	0.00	0.70	0.80
Reduction Benefit			**0**	**5**	**1**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**7.00**			
Interchanges & Ramp Geometry								
Lengthen exit ramp deceleration distance	x	0.10	0.00	1.00	7.00	0.00	0.10	0.70
Reduced Crashes	**SB Ramps**		0.00	0.57	4.02	0.00	0.43	2.98
Reduction Benefit			**0**	**3**	**4**			

Total Alternative Reduction Benefits	**Fatal**	**Injury**	**PDO**
Total Reduction Benefits	**0**	**52**	**20**
Total Alternative Reduction Benefit		**72**	

CTH II Alternative 3

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**13.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	x	0.20	0.00	7.00	13.00	0.00	1.40	2.60
Reduced Crashes	**NB Diverge**		0.00	5.60	10.40	0.00	1.40	2.60
Reduction Benefit			**0**	**10**	**4**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**15.00**	**20.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	**x**	0.20	0.00	15.00	20.00	0.00	3.00	4.00
Reduced Crashes	**NB Merge**		0.00	12.00	16.00	0.00	3.00	4.00
Reduction Benefit			**0**	**21**	**6**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**19.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	**x**	0.20	0.00	9.00	19.00	0.00	1.80	3.80
Reduced Crashes	**SB Diverge**		0.00	7.20	15.20	0.00	1.80	3.80
Reduction Benefit			**0**	**13**	**5**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**15.00**			
Reduced Crashes	**SB Merge**		0.00	9.00	15.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**8.00**			
		0.90	0.00	7.00	8.00			
Add Roundabout at Appropriate Locations	x	0.76	0.00	7.00	8.00	0.00	5.32	-0.26
		0.38	0.00	7.00	8.00			
Reduced Crashes	**NB Ramps**		0.00	1.68	8.26	0.00	5.32	-0.26
Reduction Benefit			**0**	**37**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**7.00**			
		0.90	0.00	1.00	7.00			
Add Roundabout at Appropriate Locations	x	0.76	0.00	1.00	7.00	0.00	0.76	2.19
		0.38	0.00	1.00	7.00			
Reduced Crashes	**SB Ramps**		0.00	0.24	4.81	0.00	0.76	2.19
Reduction Benefit			**0**	**5**	**3**			

Total Alternative Reduction Benefits	**Fatal**	**Injury**	**PDO**
Total Reduction Benefits	**0**	**86**	**18**
Total Alternative Reduction Benefit		**104**	

CTH II Alternative 4

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**13.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	x	0.20	0.00	7.00	13.00	0.00	1.40	2.60
Reduced Crashes	**NB Diverge**		0.00	5.60	10.40	0.00	1.40	2.60
Reduction Benefit			**0**	**10**	**4**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**15.00**	**20.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	**x**	0.20	0.00	15.00	20.00	0.00	3.00	4.00
Reduced Crashes	**NB Merge**		0.00	12.00	16.00	0.00	3.00	4.00
Reduction Benefit			**0**	**21**	**6**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**19.00**			
Interchanges & Ramp Geometry								
Add auxiliary lane between interchanges (WisDOT add on)	**x**	0.20	0.00	9.00	19.00	0.00	1.80	3.80
Reduced Crashes	**SB Diverge**		0.00	7.20	15.20	0.00	1.80	3.80
Reduction Benefit			**0**	**13**	**5**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**15.00**			
Reduced Crashes	**SB Merge**		0.00	9.00	15.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**8.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	7.00	8.00	0.00	5.32	-0.26
		0.76	0.00	7.00	8.00			
		0.38	0.00	7.00	8.00			
Reduced Crashes	**NB Ramps**		0.00	1.68	8.26	0.00	5.32	-0.26
Reduction Benefit			**0**	**37**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**7.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	1.00	7.00	0.00	0.76	2.19
		0.76	0.00	1.00	7.00			
		0.38	0.00	1.00	7.00			
Reduced Crashes	**SB Ramps**		0.00	0.24	4.81	0.00	0.76	2.19
Reduction Benefit			**0**	**5**	**3**			

Total Alternative Reduction Benefits	**Fatal**	**Injury**	**PDO**
Total Reduction Benefits	**0**	**86**	**18**
Total Alternative Reduction Benefit		**104**	

CTH N Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Reduced Crashes	**NB Diverge**		0.00	4.00	5.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**5.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	3.00	5.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	3.00	5.00	0.00	0.30	0.50
Reduced Crashes	**NB Merge**		0.00	2.70	4.50	0.00	0.30	0.50
Reduction Benefit			**0**	**2**	**1**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**1.00**	**5.00**	**8.00**			
Reduced Crashes	**SB Diverge**		1.00	5.00	8.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**8.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	2.00	8.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	2.00	8.00	0.00	0.20	0.80
Reduced Crashes	**SB Merge**		0.00	1.80	7.20	0.00	0.20	0.80
Reduction Benefit			**0**	**1**	**1**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**9.00**			
Reduced Crashes	**NB Ramps**		0.00	7.00	9.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**10.00**			
Reduced Crashes	**SB Ramps**		0.00	7.00	10.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**3**	**2**
Total Alternative Reduction Benefit		**5**	

CTH N Alternative 2

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Reduced Crashes	**NB Diverge**		0.00	4.00	5.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**5.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	3.00	5.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	3.00	5.00	0.00	0.30	0.50
Reduced Crashes	**NB Merge**		0.00	2.70	4.50	0.00	0.30	0.50
Reduction Benefit			**0**	**2**	**1**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**1.00**	**5.00**	**8.00**			
Reduced Crashes	**SB Diverge**		1.00	5.00	8.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**8.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	X		0.00	2.00	8.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	2.00	8.00	0.00	0.20	0.80
Reduced Crashes	**SB Merge**		0.00	1.80	7.20	0.00	0.20	0.80
Reduction Benefit			**0**	**1**	**1**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**9.00**			
Reduced Crashes	**NB Ramps**		0.00	7.00	9.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**10.00**			
Reduced Crashes	**SB Ramps**		0.00	7.00	10.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**3**	**2**
Total Alternative Reduction Benefit		**5**	

CTH N Alternative 3

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**9.00**			
Other Intersection Geometrics								
Add Roundabout at Appropriate Locations	X	0.90	0.00	7.00	9.00	0.00	5.32	0.12
		0.76	0.00	7.00	9.00			
		0.38	0.00	7.00	9.00			
Reduced Crashes	**NB Ramps**		0.00	1.68	8.88	0.00	5.32	0.12
Reduction Benefit			**0**	**37**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**10.00**			
Other Intersection Geometrics								
Add Roundabout at Appropriate Locations	X	0.90	0.00	7.00	10.00	0.00	5.32	0.50
		0.76	0.00	7.00	10.00			
		0.38	0.00	7.00	10.00			
Reduced Crashes	**SB Ramps**		0.00	1.68	9.50	0.00	5.32	0.50
Reduction Benefit			**0**	**37**	**1**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**74**	**1**
Total Alternative Reduction Benefit	**75**		

CTH OO Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**6.00**			
Reduced Crashes	**NB Diverge**		0.00	4.00	6.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**1.00**			
Reduced Crashes	**NB Merge**		0.00	4.00	1.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**0.00**			
Reduced Crashes	**SB Diverge**		0.00	3.00	0.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**19.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	9.00	19.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	9.00	19.00	0.00	0.90	1.90
Reduced Crashes	**SB Merge**		0.00	8.10	17.10	0.00	0.90	1.90
Reduction Benefit			**0**	**6**	**3**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**16.00**			
Signage								
Modify signage to encourage more efficient lane use	x	n.a.	0.00	6.00	16.00	0.00	0.00	0.00
Other Intersection Geometrics								
Provide Additional Storage for Left turn Lane	x	0.15	0.00	6.00	16.00	0.00	0.90	2.40
Add Right turn Lane	x	0.25	0.00	5.10	13.60	0.00	1.28	3.40
Reduced Crashes	**NB Ramps**		0.00	3.83	10.20	0.00	2.18	5.80
Reduction Benefit			**0**	**15**	**8**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**8.00**	**18.00**			
Reduced Crashes	**SB Ramps**		0.00	8.00	18.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**21**	**11**
Total Alternative Reduction Benefit		**32**	

CTH OO Alternative 2

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**6.00**			
Reduced Crashes	**NB Diverge**		0.00	4.00	6.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**1.00**			
Reduced Crashes	**NB Merge**		0.00	4.00	1.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**0.00**			
Reduced Crashes	**SB Diverge**		0.00	3.00	0.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**19.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	9.00	19.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	9.00	19.00	0.00	0.90	1.90
Reduced Crashes	**SB Merge**		0.00	8.10	17.10	0.00	0.90	1.90
Reduction Benefit			**0**	**6**	**3**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**16.00**			
Signage								
Modify signage to encourage more efficient lane use	x	n.a.	0.00	6.00	16.00	0.00	0.00	0.00
Other Intersection Geometrics								
Provide Additional Storage for Left turn Lane	x	0.15	0.00	6.00	16.00	0.00	0.90	2.40
Add Right turn Lane	x	0.25	0.00	5.10	13.60	0.00	1.28	3.40
Reduced Crashes	**NB Ramps**		0.00	3.83	10.20	0.00	2.18	5.80
Reduction Benefit			**0**	**15**	**8**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**8.00**	**18.00**			
Reduced Crashes	**SB Ramps**		0.00	8.00	18.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**21**	**11**
Total Alternative Reduction Benefit		**32**	

CTH OO Alternative 3

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**6.00**			
Reduced Crashes	**NB Diverge**		0.00	4.00	6.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**1.00**			
Reduced Crashes	**NB Merge**		0.00	4.00	1.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**0.00**			
Reduced Crashes	**SB Diverge**		0.00	3.00	0.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**19.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	9.00	19.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	9.00	19.00	0.00	0.90	1.90
Reduced Crashes	**SB Merge**		0.00	8.10	17.10	0.00	0.90	1.90
Reduction Benefit			**0**	**6**	**3**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**16.00**			
Other								
Side road spacing(ET add on)	x	0.15	0.00	6.00	16.00	0.00	0.90	2.40
Other Intersection Geometrics								
Provide Additional Storage for Left turn Lane	x	0.15	0.00	5.10	13.60	0.00	0.77	2.04
Add Right turn Lane	x	0.25	0.00	4.34	11.56	0.00	1.08	2.89
Reduced Crashes	**NB Ramps**		0.00	3.25	8.67	0.00	2.75	7.33
Reduction Benefit			**0**	**19**	**10**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**8.00**	**18.00**			
Reduced Crashes	**SB Ramps**		0.00	8.00	18.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**25**	**13**
Total Alternative Reduction Benefit		**38**	

CTH OO Alternative 4 & 5

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**6.00**			
Reduced Crashes	**NB Diverge**		0.00	4.00	6.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**1.00**			
Reduced Crashes	**NB Merge**		0.00	4.00	1.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**0.00**			
Reduced Crashes	**SB Diverge**		0.00	3.00	0.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**9.00**	**19.00**			
Reduced Crashes	**SB Merge**		0.00	9.00	19.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**6.00**	**16.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	6.00	16.00	0.00	4.56	3.25
		0.76	0.00	6.00	16.00			
		0.38	0.00	6.00	16.00			
Reduced Crashes	**NB Ramps**		0.00	1.44	12.75	0.00	4.56	3.25
Reduction Benefit			**0**	**32**	**5**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**8.00**	**18.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	8.00	18.00	0.00	6.08	3.07
		0.76	0.00	8.00	18.00			
		0.38	0.00	8.00	18.00			
Reduced Crashes	**SB Ramps**		0.00	1.92	14.93	0.00	6.08	3.07
Reduction Benefit			**0**	**43**	**4**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**75**	**9**
Total Alternative Reduction Benefit		**84**	

CTH S Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			1.00	10.00	10.00			
Interchanges & Ramp Geometry								
Reduced Crashes	NB Diverge		1.00	10.00	10.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			1.00	6.00	13.00			
Reduced Crashes	NB Merge		1.00	6.00	13.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			0.00	10.00	13.00			
Reduced Crashes	SB Diverge		0.00	10.00	13.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			0.00	12.00	13.00			
Reduced Crashes	SB Merge		0.00	12.00	13.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			0.00	0.00	1.00			
Interchanges & Ramp Geometry								
Lengthen exit ramp deceleration distance	x	0.10	0.00	0.00	1.00	0.00	0.00	0.10
Reduced Crashes	NB Ramps		0.00	0.00	0.90	0.00	0.00	0.10
Reduction Benefit			0	0	0			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			0.00	1.00	1.00			
Interchanges & Ramp Geometry								
Lengthen exit ramp deceleration distance	x	0.10	0.00	1.00	1.00	0.00	0.10	0.10
Reduced Crashes	SB Ramps		0.00	0.90	0.90	0.00	0.10	0.10
Reduction Benefit			0	0	0			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	0	0	0
Total Alternative Reduction Benefit		0	

CTH S Alternative 2

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			**1.00**	**10.00**	**10.00**			
Interchanges & Ramp Geometry								
Reduced Crashes	**NB Diverge**		1.00	10.00	10.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			**1.00**	**6.00**	**13.00**			
Reduced Crashes	**NB Merge**		1.00	6.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			**0.00**	**10.00**	**13.00**			
Reduced Crashes	**SB Diverge**		0.00	10.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			**0.00**	**12.00**	**13.00**			
Reduced Crashes	**SB Merge**		0.00	12.00	13.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			**0.00**	**0.00**	**1.00**			
Interchanges & Ramp Geometry								
Improve Signal Timing	x	0.05	0.00	0.00	0.90	0.00	0.00	0.05
Add Right turn Lane		0.25	0.00	0.00	0.86	0.00	0.00	0.21
Reduced Crashes	**NB Ramps**		0.00	0.00	0.86	0.00	0.00	0.15
Reduction Benefit			**0**	**0**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			**0.00**	**1.00**	**1.00**			
Interchanges & Ramp Geometry								
Lengthen exit ramp deceleration distance	x	0.10	0.00	1.00	1.00	0.00	0.10	0.10
Signal Operations Improvements								
Improve Signal Timing	x	0.10	0.00	0.90	0.90	0.00	0.09	0.09
Other Intersection Geometrics								
Add Right turn Lane		0.25	0.00	0.81	0.81	0.00	0.20	0.20
Reduced Crashes	**SB Ramps**		0.00	0.81	0.81	0.00	0.19	0.19
Reduction Benefit			**0**	**1**	**0**			

Total Alternative Reduction Benefits	**Fatal**	**Injury**	**PDO**
Total Reduction Benefits	**0**	**1**	**0**
Total Alternative Reduction Benefit		**1**	

CTH S Alternative 3

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			1.00	10.00	10.00			
Interchanges & Ramp Geometry								
Reduced Crashes	NB Diverge		1.00	10.00	10.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			1.00	6.00	13.00			
Reduced Crashes	NB Merge		1.00	6.00	13.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			0.00	10.00	13.00			
Reduced Crashes	SB Diverge		0.00	10.00	13.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			0.00	12.00	13.00			
Reduced Crashes	SB Merge		0.00	12.00	13.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			0.00	0.00	1.00			
Add Roundabout at Appropriate Locations	x	0.90	0.00	0.00	1.00	0.00	0.00	0.38
		0.76	0.00	0.00	1.00			
		0.38	0.00	0.00	1.00			
Reduced Crashes	NB Ramps		0.00	0.00	0.62	0.00	0.00	0.38
Reduction Benefit			0	0	0			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2009 Summary of Crashes			0.00	1.00	1.00			
Add Roundabout at Appropriate Locations	x	0.90	0.00	1.00	1.00	0.00	0.76	-0.09
		0.76	0.00	1.00	1.00			
		0.38	0.00	1.00	1.00			
Reduced Crashes	SB Ramps		0.00	0.24	1.09	0.00	0.76	-0.09
Reduction Benefit			0	3	0			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	0	3	0
Total Alternative Reduction Benefit		3	

CTH U Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**1.00**	**1.00**	**11.00**			
Interchanges & Ramp Geometry								
Lengthen entrance ramp acceleration distance	X	0.10	1.00	1.00	11.00	0.10	0.10	1.10
Weaving Section								
Lengthen Type A weaving section	X		0.90	0.90	9.90	0.00	0.00	0.00
Other								
Widen bridge (at least 6 feet)	X		0.90	0.90	9.90	0.00	0.00	0.00
Reduced Crashes	**NB Diverge**		0.90	0.90	9.90	0.10	0.10	1.10
Reduction Benefit			**1**	**1**	**2**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**0.00**	**11.00**			
Reduced Crashes	**NB Merge**		0.00	0.00	11.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**5.00**			
Reduced Crashes	**SB Diverge**		0.00	2.00	5.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**6.00**			
Reduced Crashes	**SB Merge**		0.00	3.00	6.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**1.00**			
Reduced Crashes	**NB Ramps**		0.00	1.00	1.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**0.00**	**1.00**			
Reduced Crashes	**SB Ramps**		0.00	0.00	1.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**1**	**1**	**2**
Total Alternative Reduction Benefit	**4**		

CTH U Alternative 3

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			1.00	1.00	11.00			
Interchanges & Ramp Geometry								
Reduced Crashes	NB Diverge		1.00	1.00	11.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	0.00	11.00			
Reduced Crashes	NB Merge		0.00	0.00	11.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	2.00	5.00			
Reduced Crashes	SB Diverge		0.00	2.00	5.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	3.00	6.00			
Reduced Crashes	SB Merge		0.00	3.00	6.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	1.00	1.00			
Other Intersection Geometrics								
Add Roundabout at Appropriate Locations	x	0.90	0.00	1.00	1.00	0.00	0.76	-0.09
		0.76	0.00	1.00	1.00			
		0.38	0.00	1.00	1.00			
Reduced Crashes	NB Ramps		0.00	0.24	1.09	0.00	0.76	-0.09
Reduction Benefit			0	5	0			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	0.00	1.00			
Add Roundabout at Appropriate Locations	x	0.90	0.00	0.00	1.00	0.00	0.00	0.38
		0.76	0.00	0.00	1.00			
		0.38	0.00	0.00	1.00			
Reduced Crashes	SB Ramps		0.00	0.00	0.62	0.00	0.00	0.38
Reduction Benefit			0	0	1			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	0	5	1
Total Alternative Reduction Benefit		6	

Oakridge/Main Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	4.00	5.00			
Reduced Crashes	NB Diverge		0.00	4.00	5.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes								
Reduced Crashes	0		0.00	0.00	0.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	7.00	16.00			
Reduced Crashes	SB Diverge		0.00	7.00	16.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes								
Reduced Crashes	0		0.00	0.00	0.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	2.00	8.00			
Reduced Crashes	NB Ramps		0.00	2.00	8.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			0.00	1.00	4.00			
Reduced Crashes	SB Ramps		0.00	1.00	4.00	0.00	0.00	0.00
Reduction Benefit			0	0	0			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	0	0	0
Total Alternative Reduction Benefit	0		

Oakridge/Main Alternative 2

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Interchanges & Ramp Geometry								
Lengthen exit ramp deceleration distance		0.10	0.00	4.00	5.00	0.00	0.40	0.50
Horizontal Curve								
Decrease horizontal curve radius		0.40	0.00	4.00	5.00	0.00	1.60	2.00
Other								
Realign Roadway		0.40	0.00	4.00	5.00	0.00	1.60	2.00
Reduced Crashes	**NB Diverge**		0.00	4.00	5.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes								
Reduced Crashes	**0**		0.00	0.00	0.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**16.00**			
Interchanges & Ramp Geometry								
Lengthen exit ramp deceleration distance		0.10	0.00	7.00	16.00	0.00	0.70	1.60
Horizontal Curve								
Decrease horizontal curve radius		0.40	0.00	7.00	16.00	0.00	2.80	6.40
Other								
Realign Roadway		0.40	0.00	7.00	16.00	0.00	2.80	6.40
Reduced Crashes	**SB Diverge**		0.00	7.00	16.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes								
Reduced Crashes	**0**		0.00	0.00	0.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**8.00**			
Interchanges & Ramp Geometry								
Lengthen exit ramp deceleration distance	x	0.10	0.00	2.00	8.00	0.00	0.20	0.80
Horizontal Curve								
Decrease horizontal curve radius	x	0.40	0.00	1.80	7.20	0.00	0.72	2.88
Other								
Realign Roadway	x	0.40	0.00	1.08	4.32	0.00	0.43	1.73
Reduced Crashes	**NB Ramps**		0.00	0.65	2.59	0.00	1.35	5.41
Reduction Benefit			**0**	**9**	**8**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**4.00**			
Interchanges & Ramp Geometry								
Lengthen exit ramp deceleration distance	x	0.10	0.00	1.00	4.00	0.00	0.10	0.40
Horizontal Curve								
Decrease horizontal curve radius	x	0.40	0.00	0.90	3.60	0.00	0.36	1.44
Other								
Realign Roadway	x	0.40	0.00	0.54	2.16	0.00	0.22	0.86
Reduced Crashes	**SB Ramps**		0.00	0.32	1.30	0.00	0.68	2.70
Reduction Benefit			**0**	**5**	**4**			

Total Alternative Reduction Benefits	**Fatal**	**Injury**	**PDO**
Total Reduction Benefits	**0**	**14**	**12**
Total Alternative Reduction Benefit		**26**	

Oakridge/Main Alternative 3

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**4.00**	**5.00**			
Reduced Crashes	**NB Diverge**		0.00	4.00	5.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes								
Reduced Crashes	**0**		0.00	0.00	0.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**16.00**			
Reduced Crashes	**SB Diverge**		0.00	7.00	16.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes								
Reduced Crashes	**0**		0.00	0.00	0.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**8.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	2.00	8.00	0.00	1.52	2.10
		0.76	0.00	2.00	8.00			
		0.38	0.00	2.00	8.00			
Reduced Crashes	**NB Ramps**		0.00	0.48	5.90	0.00	1.52	2.10
Reduction Benefit			**0**	**11**	**3**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**4.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	1.00	4.00	0.00	0.76	1.05
		0.76	0.00	1.00	4.00			
		0.38	0.00	1.00	4.00			
Reduced Crashes	**SB Ramps**		0.00	0.24	2.95	0.00	0.76	1.05
Reduction Benefit			**0**	**5**	**1**			

Total Alternative Reduction Benefits	**Fatal**	**Injury**	**PDO**
Total Reduction Benefits	**0**	**16**	**4**
Total Alternative Reduction Benefit	**20**		

WIS 15 Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**10.00**			
Reduced Crashes	**NB Diverge**		0.00	1.00	10.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**10.00**	**6.00**			
Convert taper style exit ramp to parallel style.	X		0.00	10.00	6.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	10.00	6.00	0.00	1.00	0.60
Reduced Crashes	**NB Merge**		0.00	9.00	5.40	0.00	1.00	0.60
Reduction Benefit			**0**	**7**	**1**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**3.00**			
Reduced Crashes	**SB Diverge**		0.00	3.00	3.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**2.00**			
Reduced Crashes	**SB Merge**		0.00	2.00	2.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**6.00**			
Add Left turn Lane	X	0.25	0.00	3.00	6.00	0.00	0.75	1.50
Reduced Crashes	**NB Ramps**		0.00	2.25	4.50	0.00	0.75	1.50
Reduction Benefit			**0**	**5**	**2**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**19.00**	**34.00**			
Add Right turn Lane	X	0.25	0.00	19.00	34.00	0.00	4.75	8.50
Reduced Crashes	**SB Ramps**		0.00	14.25	25.50	0.00	4.75	8.50
Reduction Benefit			**0**	**33**	**12**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**45**	**15**
Total Alternative Reduction Benefit		**60**	

WIS 15 Alternative 2

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**10.00**			
Reduced Crashes	**NB Diverge**		0.00	1.00	10.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**10.00**	**6.00**			
Convert taper style exit ramp to parallel style.	X		0.00	10.00	6.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	X	0.10	0.00	10.00	6.00	0.00	1.00	0.60
Reduced Crashes	**NB Merge**		0.00	9.00	5.40	0.00	1.00	0.60
Reduction Benefit			**0**	**7**	**1**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**3.00**			
Reduced Crashes	**SB Diverge**		0.00	3.00	3.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**2.00**			
Reduced Crashes	**SB Merge**		0.00	2.00	2.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**6.00**			
Add Left turn Lane	X	0.25	0.00	3.00	6.00	0.00	0.75	1.50
Reduced Crashes	**NB Ramps**		0.00	2.25	4.50	0.00	0.75	1.50
Reduction Benefit			**0**	**5**	**2**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**19.00**	**34.00**			
Add Right turn Lane	X	0.25	0.00	19.00	34.00	0.00	4.75	8.50
Reduced Crashes	**SB Ramps**		0.00	14.25	25.50	0.00	4.75	8.50
Reduction Benefit			**0**	**33**	**12**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**45**	**15**
Total Alternative Reduction Benefit		**60**	

WIS 15 Alternative 4

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**10.00**			
Reduced Crashes	**NB Diverge**		0.00	1.00	10.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**10.00**	**6.00**			
Convert taper style exit ramp to parallel style.			0.00	10.00	6.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance		0.10	0.00	10.00	6.00	0.00	1.00	0.60
Reduced Crashes	**NB Merge**		0.00	10.00	6.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**3.00**			
Reduced Crashes	**SB Diverge**		0.00	3.00	3.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**2.00**	**2.00**			
Reduced Crashes	**SB Merge**		0.00	2.00	2.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**3.00**	**6.00**			
Interchanges & Ramp Geometry								
Add Roundabout at Appropriate Locations	x	0.90	0.00	3.00	6.00	0.00	2.28	0.87
		0.76	0.00	3.00	6.00			
		0.38	0.00	3.00	6.00			
Reduced Crashes	**NB Ramps**		0.00	0.72	5.13	0.00	2.28	0.87
Reduction Benefit			**0**	**16**	**1**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**19.00**	**34.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	19.00	34.00	0.00	14.44	3.97
		0.76	0.00	19.00	34.00			
		0.38	0.00	19.00	34.00			
Reduced Crashes	**SB Ramps**		0.00	4.56	30.03	0.00	14.44	3.97
Reduction Benefit			**0**	**101**	**6**			

Total Alternative Reduction Benefits	**Fatal**	**Injury**	**PDO**
Total Reduction Benefits	**0**	**117**	**7**
Total Alternative Reduction Benefit		**124**	

CTH JJ (Winneconne) Alternative 1

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**2.00**	**6.00**	**16.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		2.00	6.00	16.00	0.00	0.00	0.00
Lengthen exit ramp deceleration distance	x	0.10	2.00	6.00	16.00	0.20	0.60	1.60
Reduced Crashes	**NB Diverge**		1.80	5.40	14.40	0.20	0.60	1.60
Reduction Benefit			**3**	**4**	**2**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**22.00**			
Reduced Crashes	**NB Merge**		0.00	1.00	22.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**2.00**	**10.00**	**15.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		2.00	10.00	15.00	0.00	0.00	0.00
Lengthen exit ramp deceleration distance	x	0.10	2.00	10.00	15.00	0.20	1.00	1.50
Reduced Crashes	**SB Diverge**		1.80	9.00	13.50	0.20	1.00	1.50
Reduction Benefit			**3**	**7**	**2**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**22.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	7.00	22.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	7.00	22.00	0.00	0.70	2.20
Reduced Crashes	**SB Merge**		0.00	6.30	19.80	0.00	0.70	2.20
Reduction Benefit			**0**	**5**	**3**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**5.00**	**7.00**			
Reduced Crashes	**NB Ramps**		0.00	5.00	7.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**10.00**	**18.00**			
Reduced Crashes	**SB Ramps**		0.00	10.00	18.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**6**	**16**	**7**
Total Alternative Reduction Benefit	**29**		

CTH JJ (Winneconne) Alternative 2

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**2.00**	**6.00**	**16.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		2.00	6.00	16.00	0.00	0.00	0.00
Lengthen exit ramp deceleration distance	x	0.10	2.00	6.00	16.00	0.20	0.60	1.60
Reduced Crashes	**NB Diverge**		1.80	5.40	14.40	0.20	0.60	1.60
Reduction Benefit			**3**	**4**	**2**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**22.00**			
Reduced Crashes	**NB Merge**		0.00	1.00	22.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**2.00**	**10.00**	**15.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		2.00	10.00	15.00	0.00	0.00	0.00
Lengthen exit ramp deceleration distance	x	0.10	2.00	10.00	15.00	0.20	1.00	1.50
Reduced Crashes	**SB Diverge**		1.80	9.00	13.50	0.20	1.00	1.50
Reduction Benefit			**3**	**7**	**2**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**22.00**			
Interchanges & Ramp Geometry								
Convert taper style exit ramp to parallel style.	x		0.00	7.00	22.00	0.00	0.00	0.00
Lengthen entrance ramp acceleration distance	x	0.10	0.00	7.00	22.00	0.00	0.70	2.20
Reduced Crashes	**SB Merge**		0.00	6.30	19.80	0.00	0.70	2.20
Reduction Benefit			**0**	**5**	**3**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**5.00**	**7.00**			
Reduced Crashes	**NB Ramps**		0.00	5.00	7.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**10.00**	**18.00**			
Other Intersection Geometrics								
Add Right turn Lane	x	0.25	0.00	10.00	18.00	0.00	2.50	4.50
Reduced Crashes	**SB Ramps**		0.00	7.50	13.50	0.00	2.50	4.50
Reduction Benefit			**0**	**18**	**6**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**6**	**34**	**13**
Total Alternative Reduction Benefit		**53**	

CTH JJ (Winneconne) Alternative 3 & 4

NB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**2.00**	**6.00**	**16.00**			
Reduced Crashes	**NB Diverge**		2.00	6.00	16.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**1.00**	**22.00**			
Reduced Crashes	**NB Merge**		0.00	1.00	22.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Diverge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**2.00**	**10.00**	**15.00**			
Reduced Crashes	**SB Diverge**		2.00	10.00	15.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

SB Merge		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**7.00**	**22.00**			
Reduced Crashes	**SB Merge**		0.00	7.00	22.00	0.00	0.00	0.00
Reduction Benefit			**0**	**0**	**0**			

NB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**5.00**	**7.00**			
Add Roundabout at Appropriate Locations	x	0.90	0.00	5.00	7.00	0.00	3.80	0.30
		0.76	0.00	5.00	7.00			
		0.38	0.00	5.00	7.00			
Reduced Crashes	**NB Ramps**		0.00	1.20	6.70	0.00	3.80	0.30
Reduction Benefit			**0**	**27**	**0**			

SB Ramps		Estimated Reduction	Fatal	Injury	PDO	Fatal Reduction	Injury Reduction	PDO Reduction
2002-2006 Summary of Crashes			**0.00**	**10.00**	**18.00**			
Interchanges & Ramp Geometry								
Add Roundabout at Appropriate Locations	x	0.90	0.00	10.00	18.00	0.00	7.60	2.13
		0.76	0.00	10.00	18.00			
		0.38	0.00	10.00	18.00			
Reduced Crashes	**SB Ramps**		0.00	2.40	15.87	0.00	7.60	2.13
Reduction Benefit			**0**	**53**	**3**			

Total Alternative Reduction Benefits	Fatal	Injury	PDO
Total Reduction Benefits	**0**	**80**	**3**
Total Alternative Reduction Benefit	**83**		