Appendix C

Transportation Impact Study

Traffic Impact Study

Buffalo Niagara Medical Campus
North End Development

City of Buffalo, Erie County, New York

Prepared for:

Buffalo Niagara Medical Campus
Creating Knowledge. Transforming Lives.

701 Ellicott Street
Buffalo, New York 14203

October 2008

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Buffalo Niagara Medical Campus – North End Development
Traffic Impact Study
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1) Introduction

This traffic impact study (TIS) evaluates the potential transportation effects from the construction of four facilities within the Buffalo Niagara Medical Campus (BNMC) in the City of Buffalo. The BNMC is a non-profit corporation that consists of the region's top clinical, research, and medical education institutions:

- Buffalo Hearing & Speech Center
- Buffalo Medical Group Foundation
- Hauptman-Woodward Medical Research Institute
- Kaleida Health
- Olmsted Center for the Visually Impaired
- Roswell Park Cancer Institute
- University at Buffalo
- Upstate New York Transplant Services

In line with their vision help to create a healthier community and attract increased investment in the medical campus as well as in the surrounding neighborhoods, the BNMC is proposing a number of projects on the north end of campus. The North End Development includes over 1 million square feet of medical, educational, research and office space.

This TIS is part of a larger generic environmental impact statement (GEIS) that assesses whether the development will have significant adverse impacts to the environment. More specifically, this traffic impact study evaluates:

- Impacts to the transportation system,
- Impacts to parking supply and demand, and
- Impacts associated with the closure of Goodrich Street.

Separate from this GEIS, a Comprehensive Transportation, Traffic, and Parking Plan is being developed for the BNMC by the consultant team of Howard/Stein-Hudson Associates, Inc. and Walker Parking Consultants (HSH/Walker). The goal of this plan is to maintain a balance between growth and sustainability on the campus. The plan will address immediate (next five years) parking and transportation needs and make long-term (2014 – 2024) recommendations to create a multi-modal transportation infrastructure for the campus. The future conditions analysis in the HSH/Walker study will include the developments included in the GEIS for the North End Development as well as additional proposed projects throughout campus.

2) Project Description

Brief descriptions of each of the North End Development projects are as follows:

Global Vascular Institute (GVI)
The GVI will be located adjacent to Buffalo General Hospital (BGH) on the northeast corner of the intersection of Ellicott Street and Goodrich Street. The GVI will be approximately 11-12 stories in height and approximately 500,000 square feet of floor area. It is being developed in conjunction with the closure of Millard Fillmore Gates Circle Hospital and to provide a state-of-the-art vascular center that will serve Western New York.

The existing Community Mental Health Center (CMHC) at 80 Goodrich Street will be demolished and the facility will be relocated to 1010 Main Street. See the description of the CMHC project below. The 60 parking spaces available in surface parking lot KH-5 will be lost as part of this development.

Skilled Nursing Facility (SNF)
The SNF will replace the existing Deaconess SNF and the beds at the Millard Fillmore Gates Circle Hospital. It will be located on Michigan Street between North Street and High Street. The 200,000 SF SNF will house 300 beds. The existing 107 parking spaces on site will be removed and 75 new spaces will be provided.

Medical Office Building (MOB)
This approximately 300,000 SF mixed use facility will be located on Main Street between High Street and Goodrich Street. The building is expected to contain retail amenities, medical office space, and laboratory facilities. Two levels of underground parking are expected to provide 200 parking spaces on-site. The site currently holds surface parking lots with a combined capacity of 312 spaces. It is anticipated that 30% (103 spaces) will be lost as part of the development.

Community Mental Health Center (CMHC)
The current CMHC (19,832 SF) resides at 80 Goodrich Street in buildings that are outdated, in need of significant repair and do not meet the safety needs of consumers and staff. The BNMC proposes to relocate the CMHC to a vacant structure at 1010 Main Street near Ellicott Street. The proposed development will total 36,586 square feet. It is anticipated that 33 parking spaces will be available on-site.

Dialysis Center & BMG Clinic
The dialysis center and BMG clinic located at 100 High Street will be relocated to 1026-1028 Main Street. There is no increase in staff, visitor or patient traffic associated with this relocation. It is anticipated that 33 parking spaces will be available on-site for these uses. The buildings at 1026-1028 Main Street are currently vacant.

Geometric Changes – Closure of Goodrich Street

The development of the GVI includes connecting to the current BGH. As a result, Goodrich Street will be closed. The closure will result in a loss of 20 on-street parking spaces. For the purposes of this study, access to any facilities will be moved to adjacent streets.

Parking Facility

The BNMC is currently in the planning stages for a new 1,600 space parking facility at the north end of campus. Five sites have been identified as potential locations for this facility and are analyzed in the TIS:

- *Site B - Parcel on Ellicott Street between High Street & Goodrich Street* (same parcel proposed for the MOB): existing surface parking lots (312 spaces)
- *Site F - Parcel on Michigan Avenue between High Street & Goodrich Street*: existing surface parking lots (205 spaces)
- *Site G - Parcel on Michigan Avenue between North Street & Goodrich Street*: existing surface parking lots (474 spaces)
- *Site I – Parcel on Ellicott Street between Carlton Street & High Street:* existing surface parking lot (207 spaces)
- *Site J – Parcel on Ellicott Street between Goodrich Street & North Street:* expansion of existing parking garage

Sites B, I, and J are located within close proximity of each other along Ellicott Street. Therefore the overall trip distribution was based on Site B and is referred to as Future Scenario #1. A focused analysis considered how the trip distribution would change between the three sites and the associated changes in traffic operations. Sites F and G are located adjacent to each other at the intersection of Michigan Avenue and Goodrich Street. The same site trip distribution was used for both these sites and is referred to as Future Scenario #2.

For the purposes of this study, all of these projects will be completed in five years, by 2013. Figure 1 in Appendix A shows the BNMC boundary, North End Development area and the proposed project locations.

3) Study Area

The BNMC campus is generally bound by Main Street to the west, Best Street to the north, Michigan Avenue to the east and Tupper Street to the South.

The study area, for this TIS analysis, includes all of the intersections and roadways within the campus as well as a number of surrounding intersections on Oak Street and Elm Street. As required by the New York State Department of Transportation (NYSDOT), the study area includes all intersections anticipated to see an increase of 100 or more peak hour entering vehicles. The study area includes the following intersections:

Main Street with:

1) Best Street;
2) North Street;
3) Goodrich Street;
4) High Street;
5) Allen Street;
6) Carlton Street;
7) Virginia Street;
8) Goodell Street;

Washington Street with:

9) High Street;
10) Carlton Street;
11) Goodell Street;
12) Tupper Street;

Ellicott Street with:

13) Best Street;
14) North Street;
15) Goodrich Street;
16) High Street;
17) Carlton Street;
18) Virginia Street;
19) Oak Street;
20) Goodell Street;
21) Tupper Street;

Michigan Avenue with:

22) Best Street;
23) North Street;
24) Goodrich Street;
25) High Street;
26) Carlton Street;
27) Virginia Street;
28) Goodell Street;
29) Cherry Street;
30) Genesee Street;

Elm Street with:

31) Virginia Street;
32) Carlton Street;
33) Goodell Street;
34) Tupper Street;
35) Genesee Street;
36) Sycamore Street;
37) Broadway Street;
38) William Street;
39) Clinton Street;
40) North Division Street;
41) South Division Street
42) Swan Street;

North Oak Street with:

43) Goodell Street;
44) Tupper Street;
45) Genesee Street;
46) Sycamore Street;
47) Broadway Street;
48) William Street;
49) Clinton Street;
50) North Division Street;
51) South Division Street;
52) Swan Street

Information for the following roadway and intersection characteristics were provided by HSH or field gathered by C&S:

Roadways

Main Street (NYS Route 5) is an urban principal arterial. This two-way roadway is a touring route that is owned by the City and runs north-south from Ferry Street to Tupper Street. North of Ferry Street, Main Street continues to run to the east. During the AM peak period, three lanes are provided for southbound traffic and two lanes are available to the northbound traffic while the opposite is true during the PM peak period. Outside of peak travel periods, two lanes are provided for travel in each direction with the third lane serving as on-street parking.

Washington Street is an urban collector. It runs north-south from High Street to Perry Street, just south of I-190. There is one travel lane in each direction of the roadway.

Ellicott Street is an urban collector. This roadway is one-way northbound from Goodell Street to Best Street and runs north-south from Swan Street to Goodell Street. Within campus, two northbound travel lanes are provided. South of Goodell Street, Ellicott Street is NYS Route 5.

North Oak Street is a local two-way roadway that runs north-south from High Street to Carlton Street with one travel lane provided for each direction. From Goodell Street to Interstate 190 (I-190), Oak Street is a one-way southbound urban arterial with three lanes that provides direct access to the I-190.

Elm Street is a local two-way roadway that runs north-south from Carlton Street to Virginia Street with one travel lane provided for each direction. From Goodell Street to Interstate 190 (I-190), it is a one-way northbound urban arterial with three lanes that provides direct access from the I-190.

Michigan Avenue is an urban minor arterial. This two-way roadway runs north-south from Forest Lawn Cemetery to the Canal. At some points, Michigan Avenue is also known as Harriet Tubman Way. In the study area, one travel lane is provided for each direction.

Best Street is an urban collector that runs west-east from Main Street to Genesee Street. The roadway turns into Summer Street west of Main Street and Walden Avenue east of Genesee Street. There is one travel lane in each direction of the roadway.

North Street is an urban collector. This two-way roadway runs west-east from Main Street to Jefferson Avenue. East of Main Street, the roadway is known as East North Street. One travel lane is provided for each direction.

Goodrich Street is a local roadway. This two-way roadway runs west-east from Main Street to Michigan Avenue. One travel lane is provided for each direction.

High Street is an urban collector. This two-way roadway runs west-east from Main Street to Genesee Street. In the study area, one travel lane is provided for each direction.

Carlton Street is an urban collector. This two-way roadway runs west-east from Main Street and dead-ends just prior to NYS Route 33. Within the study area, one travel lane is provided for each direction.

Allen Street is an urban collector. This two-way roadway runs west-east from Wadsworth Street to Main Street and provides one travel lane for each direction.

Virginia Street is a local road. This roadway is a two-way, west-east roadway from College Street to Ellicott Street. It is offset to the north on Ellicott Street where it continues in two directions until Michigan Avenue where it changes to a one-lane, one-way eastbound roadway.

Goodell Street is an urban principal arterial. This one-way roadway runs westbound from the Kensington Expressway (NYS Route 33) to Main Street. West of Main Street, the roadway is known as Edward Street. There are four westbound lanes on the roadway.

Tupper Street is an urban principal arterial. This one-way roadway runs eastbound from the Maryland Street to the Kensington Expressway (NYS Route 33). There are three eastbound lanes on the roadway.

Genesee Street is an urban minor arterial. This roadway runs southwest-northeast within the study area starting at Huron Street and continuing northeast outside the study area. There are two lanes in each direction on the roadway within the study area.

Sycamore Street is an urban collector that runs southwest-northeast from Oak Street to Walden Avenue. There is one lane provided in each direction on this roadway.

Broadway Street (NYS Route 130) is an urban minor arterial that runs southwest-northeast from Washington Street and continues northeastbound outside the study area. There are two travel lanes provided in each direction on this roadway.

William Street (NYS Route 354) is an urban minor arterial that runs west-east starting from Ellicott Street and continuing eastbound outside the study area. William Street is a divided by a median from Michigan Avenue to Jefferson Avenue and provides two lanes in each direction.

Clinton Street is an urban collector that runs east-west from Main Street and continuing outside the study area. East of Michigan Avenue, Clinton Street becomes NYS Route 354. There is one travel lane provided in each direction on this roadway.

North & South Division Streets are urban minor arterials that run east-west intermittently from Church Street to Fillmore Avenue. Within the study area, North Division Street is one-way westbound and South Division Street is one-way eastbound. Both roadways consist of four lanes west of Oak Street, three lanes between Oak Street and Elm Street and two lanes east of Elm Street.

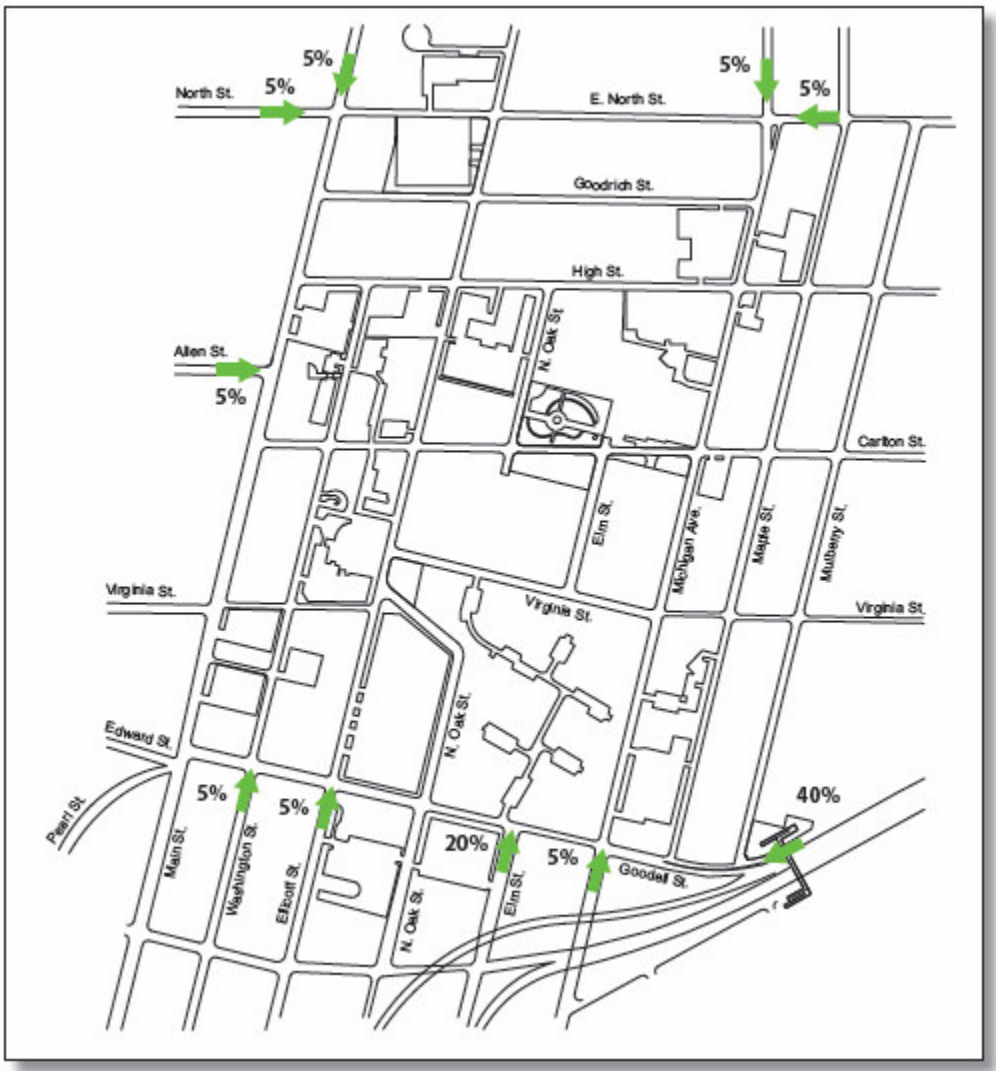
Swan Street is an urban minor arterial that runs east-west from Franklin Street until it turns into Seneca Street (NYS Route 16). It is one-way between Oak Street and Elm Street with three travel lanes. On either side of the study area, Swan Street varies from one-way westbound to two-ways and from two to four travel lanes.

The detailed descriptions of the study intersections are included in Appendix B.

Campus Access/External Distribution

Trip distribution is generally based on a zip code analysis of existing BNMC employees. This analysis conducted as part of the HSH/Walker Study documented the distribution pattern in the following graphic. The majority of vehicle trips are expected to arrive or depart from the east and north along NYS Route 33 (40%) or from the south (35%) from I-190 or NYS Route 5.

Figure 2: External Distribution



4) Existing Transportation System Conditions

a) Existing Traffic Conditions

The traffic counts for the intersections within the BNMC were provided by HSH and collected by the Greater Buffalo Niagara Regional Transportation Council (GBNRTC) in May and June of 2008. The intersections on Oak Street and Elm Street outside the campus were collected by C&S in September 2008. Traffic counts were collected for each intersection by GBNTRC from 7:00 – 10:00AM, 12:00 – 2:00 PM and 3:00 – 6:00 PM. GBNRTC provided HSH with the individual peak hour volumes for each intersection. The peak hour volumes were generally between 7:30 – 8:30 AM and 4:00 – 5:00 PM, therefore the additional counts were collected from 7:00 – 9:00 AM and 4:00 – 6:00 PM. Existing intersection data are shown in Figures 3 & 4 in Appendix A.

Appendix C provides the additional traffic count data collected by C&S.

Signal timing and phasing information was provided by GBNRTC and updated by HSH. Supplemental information was collected by C&S through field investigations and through a data request to the NYSDOT.

b) Existing Traffic Operations

The intersections included in the study were analyzed using SYNCHRO 7 which is a computer program that implements the methods presented in the 2000 Highway Capacity Manual that describe traffic operations. SYNCHRO was used to determine the Level of Service (LOS) and other measures of effectiveness at the intersections involved in this study.

The LOS for signalized intersections is defined in terms of delay. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Specifically, LOS criteria are stated in terms of the control delay per vehicle for a 15 minute analysis period and range from “A” to “F”. A LOS A is representative of a movement that is free flowing with minimal delay, while a LOS F generally represents long delays.

The LOS for unsignalized intersections is also defined in terms of control delay. Unsignalized intersection LOS at or approaching “F” is obtained when insufficient gaps exist in the opposing traffic for turning vehicles to pass through safely.

The definition of LOS, as contained in the 2000 Highway Capacity Manual, and factors upon which intersection capacity and delay are dependant, are provided in Appendix D. In general, a LOS D or better is considered acceptable in urban environments.

The original SYNCHRO model was developed by GBNRTC and updated by HSH based on site visits. C&S incorporated the additional intersection data with signal timing and phasing information provided by the NYSDOT for Goodell Street, Tupper Street, Oak Street and Elm Street. The LOS, delay in seconds, volume/capacity (v/c) ratio and 95th percentile queues for each approach of each study intersection are shown in Tables 1 & 2.

Table 1: Existing Operations Summary – AM Peak Hour

Existing Operations Summary: AM Peak Hour - Signalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Best Street	B	16.3		
Best EB left/thru/right	C	29.7	0.63	148
Best WB left/thru/right	C	30.9	0.65	156
Main NB left/thru | thru | thru/right	B	16.3	0.27	86
Main SB left/thru | thru | thru/right	A	4.3	0.17	48
Main Street/North Street	B	12.9		
North EB left/thru/right	C	23.8	0.61	139
North WB left/thru/right	C	22.4	0.44	106
Main NB left/thru | thru | thru/right	A	4.5	0.18	44
Main SB left/thru | thru | thru/right	B	10.3	0.3	86
Main Street/High Street	A	5.2		
High WB left/right	B	15.4	0.36	50
Main NB thru | thru | thru/right	A	6.3	0.18	55
Main SB left/thru | thru | thru	A	2.1	0.14	22
Main Street/Allen Street	A	7.6		
Allen EB left/right	B	12.6	0.34	86
Main NB left/thru | thru | thru	A	6.2	0.09	28
Main SB thru | thru | thru/right	A	6.0	0.15	42
Main Street/Virginia Street	A	5.0		
Virginia EB left/thru/right	C	20.5	0.35	46
Virginia WB left/thru/right	B	18.0	0.05	14
Main NB left/thru | thru | thru/right	A	2.5	0.09	20
Main SB left/thru | thru | thru/right	A	2.1	0.08	15
Main Street/Goodell Street	C	22.7		
Goodell WB left/thru | thru | thru	A	5.9	0.47	88
Goodell WB right	A	5.7	0.22	46
Main NB left/thru	F	83.3	1.02	#375
Main SB soft right | soft right	C	28.0	0.50	132
Main SB right	A	6.6	0.21	15
Washington Street/Goodell Street	A	5.2		
Goodell WB left/thru | thru | thru | thru/right	A	1.2	0.32	9
Washington NB left/thru	B	17.4	0.42	154
Washington SB thru	C	20.0	0.23	88
Washington SB right	A	6.4	0.09	8
Washington Street/Tupper Street	B	11.7		
Tupper EB left/thru | thru | thru/right	A	0.3	0.20	0
Washington NB thru	B	19.3	0.17	64
Washington NB right	A	6.3	0.09	23
Washington SB left	C	26.8	0.25	73
Washington SB thru	C	29.1	0.43	149

Existing Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Best Street	A	7.0		
Best EB left/thru	A	8.0	0.19	42
Best WB thru/right	A	6.9	0.22	45
Ellicott NB left/thru I thru/right	A	5.6	0.07	13
Ellicott Street/High Street	A	8.7		
High EB left/thru	B	14.7	0.22	67
High WB thru/right	B	13.2	0.25	70
Ellicott NB left/thru I thru/right	A	4.3	0.18	33
Ellicott Street/Goodell Street	B	12.9		
Goodell WB left/thru I thru I thru I thru/right	B	12.6	0.65	217
Ellicott NB left/thru	B	15.8	0.36	81
Ellicott Street/Tupper Street	A	9.9		
Tupper EB left/thru I thru I thru/right	A	7.2	0.30	60
Ellicott NB thru/right I right	C	21.4	0.35	133
Ellicott NB right	A	5.7	0.12	13
Ellicott SB left/thru I thru	B	13.5	0.10	17
Elm Street/Tupper Street	B	17.9		
Tupper EB thru I thru	A	2.1	0.20	20
Elm NB thru I thru/right	C	30.1	0.64	192
Elm Street/Genesee Street	C	21.6		
Genesee EB left/thru I thru	D	36.0	0.26	85
Genesee WB thru I thru/right	C	31.2	0.18	67
Elm NB left/thru I thru I thru	C	21.2	0.60	596
Elm NB right	A	4.9	0.17	68
Elm Street/Sycamore Street	A	5.6		
Sycamore EB left/thru	D	38.8	0.27	99
Sycamore WB thru/right	D	37.7	0.32	127
Elm NB left/thru I thru I thru/right	A	2.5	0.61	42
Elm Street/Broadway Street	A	6.9		
Broadway EB left/thru I thru	C	33.3	0.17	58
Broadway WB thru I thru/right	C	33.4	0.31	116
Elm NB left/thru I thru I thru/right	A	2.5	0.68	37
Elm Street/William Street	A	6.2		
William EB left/thru I thru	D	35.4	0.10	40
William WB thru I thru/right	D	36.3	0.34	112
Elm NB left/thru I thru I thru/right	A	2.5	0.69	30
Elm Street/Clinton Street	A	6.3		
Clinton EB left/thru	C	34.9	0.33	119
Clinton WB thru/right	C	34.6	0.40	138
Elm NB left/thru I thru I thru/right	A	2.4	0.72	26
Elm Street/North Division Street	A	6.9		
North Division WB thru I thru/right	C	32.2	0.21	77
Elm NB left/thru I thru I thru	A	5.4	0.81	98

Existing Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/South Division Street	A	8.5		
South Division EB left	D	44.6	0.45	153
South Division EB left/thru I thru	D	42.5	0.45	136
Elm NB thru I thru I thru/right	A	4.0	0.79	m25
Elm Street/Swan Street	C	30.0		
Swan WB thru/right	E	58.2	0.85	277
Elm NB left	A	4.8	0.48	89
Elm NB left/thru I thru I thru/right	C	30.9	1.00	674
Oak Street/Goodell Street	B	12.4		
Goodell WB left/thru I thru I thru I thru/right	B	12.2	0.69	285
Oak SB thru/right	C	20.3	0.12	51
Oak Street/Tupper Street	A	4.8		
Tupper EB thru I thru	A	2.0	0.19	7
Tupper EB right	A	0.7	0.15	0
Oak SB left/thru I thru	B	17.8	0.15	44
Oak Street/Genesee Street	B	10.6		
Genesee EB thru I thru/right	C	21.2	0.17	48
Genesee WB left/thru I thru	C	28.0	0.43	109
Oak SB left/thru I thru I thru	A	8.6	0.60	217
Oak SB right	A	2.7	0.33	50
Oak Street/Sycamore Street	A	8.7		
Sycamore EB thru/right	C	24.2	0.28	88
Sycamore WB left/thru	C	33.0	0.57	177
Oak SB left/thru I thru I thru/right	A	5.5	0.70	43
Oak Street/Broadway Street	A	8.7		
Broadway EB thru I thru/right	B	18.1	0.07	30
Broadway WB left/thru I thru	C	20.6	0.33	102
Oak SB left/thru I thru I thru/right	A	6.1	0.70	84
Oak Street/William Street	A	5.2		
William EB thru I thru/right	B	17.7	0.05	19
William WB left/thru I thru	C	25.1	0.35	98
Oak SB left/thru I thru I thru/right	A	1.9	0.62	16
Oak Street/Clinton Street	A	4.8		
Clinton EB thru/right	B	17.3	0.20	77
Clinton WB left/thru	B	19.8	0.26	100
Oak SB left/thru I thru I thru/right	A	2.8	0.70	12
Oak Street/North Division Street	A	5.5		
North Division WB left/thru I thru I thru	B	17.8	0.25	82
Oak SB thru I thru I thru/right	A	2.0	0.61	10
Oak Street/South Division Street	A	4.1		
South Division EB thru I thru I thru	B	17.1	0.12	43
South Division EB right	A	6.9	0.13	31
Oak SB left/thru I thru I thru I thru	A	1.7	0.38	11

Existing Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Oak Street/Swan Street	B	10.6		
Swan EB right I right	A	1.7	0.03	5
Swan WB left	A	8.8	0.11	40
Swan WB thru I thru	B	16.7	0.44	168
Oak SB thru I thru I thru I thru/right	A	7.5	0.42	57
Michigan Avenue/Best Street	B	11.5		
Best EB left/thru/right	B	14.5	0.37	109
Best WB left/thru/right	B	14.9	0.29	90
Michigan NB left/thru/right	A	7.1	0.16	46
Michigan SB left/thru/right	A	8.0	0.23	68
Michigan Avenue/North Street	B	17.5		
North EB left/thru/right	B	16.1	0.29	65
North WB left/thru/right	D	39.5	0.76	#205
Michigan NB left/thru	A	4.2	0.12	34
Michigan NB right	A	1.7	0.03	7
Michigan SB left/thru/right	A	4.2	0.22	60
Michigan Avenue/High Street	A	6.9		
High EB left/thru/right	B	10.4	0.19	43
High WB left/thru/right	B	12.6	0.10	31
Michigan NB left/thru/right	A	7.7	0.42	106
Michigan SB left/thru I thru/right	A	4.3	0.18	36
Michigan Avenue/Carlton Street	A	8.4		
Carlton EB left/thru/right	B	13.0	0.23	36
Carlton WB left/thru/right	B	17.5	0.16	34
Michigan NB left/thru/right	A	3.9	0.45	92
Michigan SB left/thru/right	B	12.2	0.49	156
Michigan Avenue/Virginia Street	B	17.6		
Virginia EB left/thru/right	A	8.5	0.13	29
Michigan NB left/thru/right	C	23.3	0.88	#467
Michigan SB left/thru/right	A	6.3	0.32	89
Michigan Avenue/Goodell Street	C	20.7		
Goodell WB left/thru I thru I thru I thru/right	B	17.5	0.82	381
Michigan NB left	B	19.4	0.25	66
Michigan NB thru	C	30.6	0.74	354
Michigan SB thru I thru/right	C	31.5	0.55	137
Michigan Avenue/Genesee Street	B	10.0		
Genesee EB left/thru I thru/right	B	10.5	0.25	50
Genesee WB left/thru/right	B	10.4	0.33	88
Michigan NB left/thru I thru/right	A	9.9	0.27	67
Michigan SB left/thru I thru/right	A	9.6	0.27	61

Existing Operations Summary: AM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Goodrich Street				
Goodrich WB left/right	b	10.7	0.04	3
Main NB thru I thru I thru/right	a	0	0.13	0
Main SB left/thru I thru I thru	a	3.3	0.05	2
Main Street/Carlton Street				
Carlton WB left/right	b	10.7	0.09	7
Main NB thru I thru I thru/right	a	0	0.06	0
Main SB left/thru I thru I thru	a	2	0.10	9
Washington Street/High Street				
High EB thru/right	a	0	0.05	0
High WB left/thru	a	2.5	0.02	2
Washington NB left/right	a	9.2	0.02	2
Washington Street/Carlton Street				
Carlton EB left/thru/right	a	8.3	0.21	
Carlton WB left/thru/right	a	8.4	0.18	
Washington NB left/thru/right	a	8.2	0.10	
Washington SB left/thru I thru/right	a	7.5	0.05	
Ellicott Street/North Street				
North EB left/thru	a	8.3	0.15	
North WB thru/right	a	8.8	0.26	
Ellicott NB left/thru I thru/right	a	7.7	0.11	
Ellicott Street/Goodrich Street				
Goodrich EB left/thru	a	8.2	0.09	
Goodrich WB thru/right	a	7.9	0.13	
Ellicott NB left/thru I thru/right	a	7.7	0.17	
Ellicott Street/Carlton Street				
Carlton EB left/thru	a	8.9	0.17	
Carlton WB thru/right	a	8.4	0.12	
Ellicott NB left/thru I thru/right	a	8.5	0.26	
Ellicott Street/Virginia Street				
Virginia WB right	a	9.7	0.05	4
Ellicott NB thru I thru/right	a	0	0.13	0
Ellicott Street/Oak Street				
Ellicott NB thru I thru/right	a	0	0.11	0
North Oak WB right	b	10.3	0.19	18
Michigan Avenue/Goodrich Street				
Goodrich EB left/right	b	13.0	0.09	8
Michigan NB left/thru	a	4.1	0.12	10
Michigan SB thru/right	a	0	0.24	0
Michigan Avenue/Cherry Street				
Michigan NB thru I thru/right	a	0	0.21	0
Michigan SB right/thru I thru	a	5	0.13	11

Existing Operations Summary: AM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/Virginia Street				
Virginia EB left/thru	a	3.4	0.02	2
Virginia WB thru/right	a	0	0.17	0
Elm SB left/right	b	10.1	0.05	4
Elm Street/Carlton Street				
Carlton EB thru/right	a	7.8	0.18	
Carlton WB left/thru	a	7.6	0.09	
Elm NB left/right	a	7.2	0.04	
Elm Street/Goodell Street				
Goodell WB thru I thru I thru I thru	a	0	0.30	0
Elm NB left I left	b	12.4	0.37	43

Table 2: Existing Operations Summary – PM Peak Hour

Existing Operations Summary: PM Peak Hour - Signalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Best Street	B	17.6		
Best EB left/thru/right	C	27.9	0.55	138
Best WB left/thru/right	C	30.2	0.65	174
Main NB left/thru I thru I thru/right	B	16.6	0.28	83
Main SB left/thru I thru I thru/right	A	4.7	0.19	57
Main Street/North Street	B	12.6		
North EB left/thru/right	C	27.7	0.62	132
North WB left/thru/right	C	22.5	0.48	113
Main NB left/thru I thru I thru/right	A	4.3	0.20	46
Main SB left/thru I thru I thru/right	B	11.1	0.31	100
Main Street/High Street	A	6.4		
High WB left/right	B	15.7	0.51	70
Main NB thru I thru I thru/right	A	7.4	0.17	52
Main SB left/thru I thru I thru	A	2.9	0.27	54
Main Street/Allen Street	A	7.0		
Allen EB left/right	B	10.3	0.28	64
Main NB left/thru I thru I thru	A	6.8	0.22	56
Main SB thru I thru I thru/right	A	5.8	0.14	42
Main Street/Virginia Street	A	8.4		
Virginia EB left/thru/right	B	11.4	0.25	61
Virginia WB left/thru/right	B	12.8	0.08	31
Main NB left/thru I thru I thru/right	A	7.1	0.14	29
Main SB left/thru I thru I thru/right	A	7.8	0.26	60

Existing Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Goodell Street	B	15.8		
Goodell WB left/thru I thru I thru	A	9.8	0.22	m81
Goodell WB right	A	8.8	0.11	m46
Main NB left/thru	B	16.9	0.19	64
Main SB soft right I soft right/right	C	28.3	0.57	145
Washington Street/Goodell Street	C	33.0		
Goodell WB left/thru I thru I thru I thru/right	A	2.8	0.15	16
Washington NB left/thru	F	84.0	1.04	#416
Washington SB thru	C	26.5	0.48	181
Washington SB right	A	7.8	0.07	8
Washington Street/Tupper Street	B	12.2		
Tupper EB left/thru I thru I thru/right	A	0.5	0.44	0
Washington NB thru	C	22.7	0.25	95
Washington NB right	A	8.0	0.16	37
Washington SB left	D	49.1	0.66	169
Washington SB thru	D	38.4	0.39	154
Ellicott Street/Best Street	A	7.7		
Best EB left/thru	A	9.6	0.37	81
Best WB thru/right	A	6.6	0.18	36
Ellicott NB left/thru I thru/right	A	5.4	0.12	19
Ellicott Street/High Street	A	9.8		
High EB left/thru	B	15.2	0.27	80
High WB thru/right	B	11.8	0.23	62
Ellicott NB left/thru I thru/right	A	4.3	0.12	24
Ellicott Street/Goodell Street	A	5.6		
Goodell WB left/thru I thru I thru I thru/right	A	3.3	0.25	22
Ellicott NB left/thru	B	15.5	0.37	71
Ellicott Street/Tupper Street	A	9.7		
Tupper EB left/thru I thru I thru/right	A	5.7	0.47	64
Ellicott NB thru/right I right	C	22.0	0.40	145
Ellicott NB right	B	19.7	0.39	84
Ellicott SB left/thru I thru	C	20.6	0.17	24
Elm Street/Tupper Street	A	6.6		
Tupper EB thru I thru	A	4.6	0.55	72
Elm NB thru I thru/right	B	16.9	0.26	45
Elm Street/Genesee Street	A	8.6		
Genesee EB left/thru I thru	A	8.4	0.28	18
Genesee WB thru I thru/right	B	19.9	0.15	50
Elm NB left/thru I thru I thru	A	8.0	0.62	279
Elm NB right	A	0.2	0.05	m0
Elm Street/Sycamore Street	A	9.5		
Sycamore EB left/thru	D	39.1	0.46	m159
Sycamore WB thru/right	C	21.1	0.14	55
Elm NB left/thru I thru I thru/right	A	5.6	0.46	97

Existing Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/Broadway Street	A	5.7		
Broadway EB left/thru I thru	A	8.2	0.32	26
Broadway WB thru I thru/right	B	15.2	0.10	35
Elm NB left/thru I thru I thru/right	A	4.4	0.49	49
Elm Street/William Street	A	8.1		
William EB left/thru I thru	C	28.7	0.36	76
William WB thru I thru/right	C	22.0	0.16	43
Elm NB left/thru I thru I thru/right	A	3.7	0.40	38
Elm Street/Clinton Street	B	13.7		
Clinton EB left/thru	D	43.5	0.74	223
Clinton WB thru/right	B	12.9	0.15	39
Elm NB left/thru I thru I thru/right	A	5.2	0.43	20
Elm Street/North Division Street	B	12.4		
North Division WB thru I thru/right	B	11.5	0.15	37
Elm NB left/thru I thru I thru	B	12.5	0.43	242
Elm Street/South Division Street	A	6.3		
South Division EB left	B	10.2	0.45	207
South Division EB left/thru I thru	A	7.7	0.39	146
Elm NB thru I thru I thru/right	A	4.1	0.27	34
Elm Street/Swan Street	B	15.5		
Swan WB thru/right	C	32.8	0.73	218
Elm NB left	A	1.7	0.11	12
Elm NB left/thru I thru I thru/right	A	7.6	0.26	74
Oak Street/Goodell Street	B	12.2		
Goodell WB left/thru I thru I thru I thru/right	A	7.2	0.29	81
Oak SB thru/right	C	29.6	0.54	231
Oak Street/Tupper Street	B	10.2		
Tupper EB thru I thru	A	9.4	0.68	426
Tupper EB right	A	1.1	0.24	2
Oak SB left/thru I thru	B	18.0	0.53	91
Oak Street/Genesee Street	B	15.5		
Genesee EB thru I thru/right	C	24.0	0.42	137
Genesee WB left/thru I thru	B	16.0	0.25	42
Oak SB left/thru I thru I thru	B	14.4	0.61	293
Oak SB right	A	3.1	0.15	32
Oak Street/Sycamore Street	A	8.0		
Sycamore EB thru/right	C	26.7	0.52	192
Sycamore WB left/thru	C	22.0	0.34	102
Oak SB left/thru I thru I thru/right	A	4.1	0.62	34
Oak Street/Broadway Street	A	8.2		
Broadway EB thru I thru/right	C	22.3	0.24	84
Broadway WB left/thru I thru	B	19.0	0.26	54
Oak SB left/thru I thru I thru/right	A	5.3	0.68	50

Existing Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Oak Street/William Street	A	4.4		
William EB thru I thru/right	C	20.3	0.12	39
William WB left/thru I thru	C	21.1	0.27	52
Oak SB left/thru I thru I thru/right	A	1.8	0.61	23
Oak Street/Clinton Street	B	10.5		
Clinton EB thru/right	C	32.8	0.72	298
Clinton WB left/thru	C	21.2	0.15	66
Oak SB left/thru I thru I thru/right	A	5.7	0.71	32
Oak Street/North Division Street	A	7.1		
North Division WB left/thru I thru I thru	B	15.5	0.09	32
Oak SB thru I thru I thru/right	A	6.5	0.73	49
Oak Street/South Division Street	B	11.1		
South Division EB thru I thru I thru	C	23.5	0.40	132
South Division EB right	D	41.0	0.82	#356
Oak SB left/thru I thru I thru I thru	A	1.5	0.57	11
Oak Street/Swan Street	B	10.8		
Swan EB right I right	C	30.8	0.61	169
Swan WB left	C	34.9	0.44	m127
Swan WB thru I thru	C	32.2	0.19	m55
Oak SB thru I thru I thru I thru/right	A	3.6	0.60	74
Michigan Avenue/Best Street	B	12.6		
Best EB left/thru/right	B	16.4	0.44	135
Best WB left/thru/right	B	13.6	0.25	75
Michigan NB left/thru/right	A	6.5	0.14	42
Michigan SB left/thru/right	A	7.2	0.09	31
Michigan Avenue/North Street	B	13.7		
North EB left/thru/right	C	25.6	0.57	112
North WB left/thru/right	C	28.9	0.49	91
Michigan NB left/thru	A	3.5	0.12	37
Michigan NB right	A	1.3	0.04	9
Michigan SB left/thru/right	A	3.4	0.16	48
Michigan Avenue/High Street	A	6.1		
High EB left/thru/right	B	10.6	0.25	53
High WB left/thru/right	B	13.8	0.05	22
Michigan NB left/thru/right	A	5.5	0.21	51
Michigan SB left/thru I thru/right	A	4.7	0.22	44
Michigan Avenue/Carlton Street	B	13.8		
Carlton EB left/thru/right	B	11.6	0.41	53
Carlton WB left/thru/right	B	17.4	0.16	33
Michigan NB left/thru/right	A	3.3	0.2	46
Michigan SB left/thru/right	B	18.9	0.69	#293

Existing Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Michigan Avenue/Virginia Street	A	6.8		
Virginia EB left/thru/right	A	6.2	0.36	50
Michigan NB left/thru/right	A	6.2	0.3	80
Michigan SB left/thru/right	A	7.4	0.43	130
Michigan Avenue/Goodell Street	E	73.0		
Goodell WB left/thru | thru | thru | thru/right	A	9.0	0.22	69
Michigan NB left	B	17.9	0.12	34
Michigan NB thru	C	20.4	0.32	135
Michigan SB thru | thru/right	F	145.5	1.23	#425
Michigan Avenue/Genesee Street	A	9.5		
Genesee EB left/thru | thru/right	A	9.3	0.14	34
Genesee WB left/thru/right	A	9.1	0.19	54
Michigan NB left/thru | thru/right	A	9.2	0.24	58
Michigan SB left/thru | thru/right	A	9.9	0.30	70

Existing Operations Summary: PM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Goodrich Street				
Goodrich WB left/right	b	11.7	0.10	8
Main NB thru | thru | thru/right	a	0	0.11	0
Main SB left/thru | thru | thru	a	1.4	0.17	2
Main Street/Carlton Street				
Carlton WB left/right	b	12.5	0.30	32
Main NB thru | thru | thru/right	a	0	0.07	0
Main SB left/thru | thru | thru	a	1.4	0.07	5
Washington Street/High Street				
High EB thru/right	a	0	0.09	0
High WB left/thru	a	1.3	0.02	1
Washington NB left/right	b	10.6	0.07	6
Washington Street/Carlton Street				
Carlton EB left/thru/right	a	8.0	0.12	
Carlton WB left/thru/right	a	9.5	0.29	
Washington NB left/thru/right	a	8.6	0.13	
Washington SB left/thru | thru/right	a	7.7	0.08	
Ellicott Street/North Street				
North EB left/thru	a	9.1	0.18	
North WB thru/right	a	8.9	0.18	
Ellicott NB left/thru | thru/right	a	8.7	0.28	
Ellicott Street/Goodrich Street				
Goodrich EB left/thru	a	7.7	0.06	
Goodrich WB thru/right	a	7.5	0.09	
Ellicott NB left/thru | thru/right	a	7.1	0.11	

Existing Operations Summary: PM Peak Hour - Unsignalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Carlton Street				
Carlton EB left/thru	a	8.4	0.14	
Carlton WB thru/right	a	8.7	0.22	
Ellicott NB left/thru I thru/right	a	8.0	0.17	
Ellicott Street/Virginia Street				
Virginia WB right	a	9.4	0.05	4
Ellicott NB thru I thru/right	a	0	0.10	0
Ellicott Street/Oak Street				
Ellicott NB thru I thru/right	a	0	0.10	0
North Oak WB right	b	10.3	0.22	5
Michigan Avenue/Goodrich Street				
Goodrich EB left/right	b	13.5	0.32	34
Michigan NB left/thru	a	1.0	0.02	1
Michigan SB thru/right	a	0	0.20	0
Michigan Avenue/Cherry Street				
Michigan NB thru I thru/right	a	0	0.21	0
Michigan SB left/thru I thru	a	9.1	0.42	54
Elm Street/Virginia Street				
Virginia EB left/thru	a	0.4	0.00	0
Virginia WB thru/right	a	0	0.02	0
Elm SB left/right	b	10.8	0.32	35
Elm Street/Carlton Street				
Carlton EB thru/right	a	8.0	0.17	
Carlton WB left/thru	a	8.1	0.18	
Elm NB left/right	a	7.5	0.06	
Elm Street/Goodell Street				
Goodell WB thru I thru I thru I thru	a	0	0.13	0
Elm NB left I left	b	10.9	0.20	18

~ approach is above capacity and queues could be longer
# volumes for queue cycle exceeds capacity
m queue is metered by upstream signal
err - accurate delay can not be calculated due to level of failure

Each movement at every study intersection currently operates at an acceptable level of service (LOS D or better) except for the following:

Existing AM

- Elm Street & Swan Street: LOS C (30.0)
  - Swan WB: LOS E (58.2)
- Main Street & Goodell Street: LOS C (22.7)
  - Main NB: LOS F (83.3)

Existing PM

- Michigan Avenue & Goodell Street: LOS E (73.0)
  - Michigan SB: LOS F (145.5)
- Goodell Street & Washington Street: LOS C (33.0)
  - Washington NB: LOS F (84.0)

These delays are mainly due to high opposing volumes on the arterial roadways (Elm Street and Goodell Street) which limit the amount of green time programmed for the side streets. The exception is at the intersection of Michigan Avenue and Goodell Street in the PM peak hour where there is more traffic traveling southbound on Michigan Avenue than westbound on Goodell Street, but the Goodell Street movement has 30 seconds more green time. On Main Street and Washington Street, there are also high turning volumes that share a lane with through volumes that cause high delays.

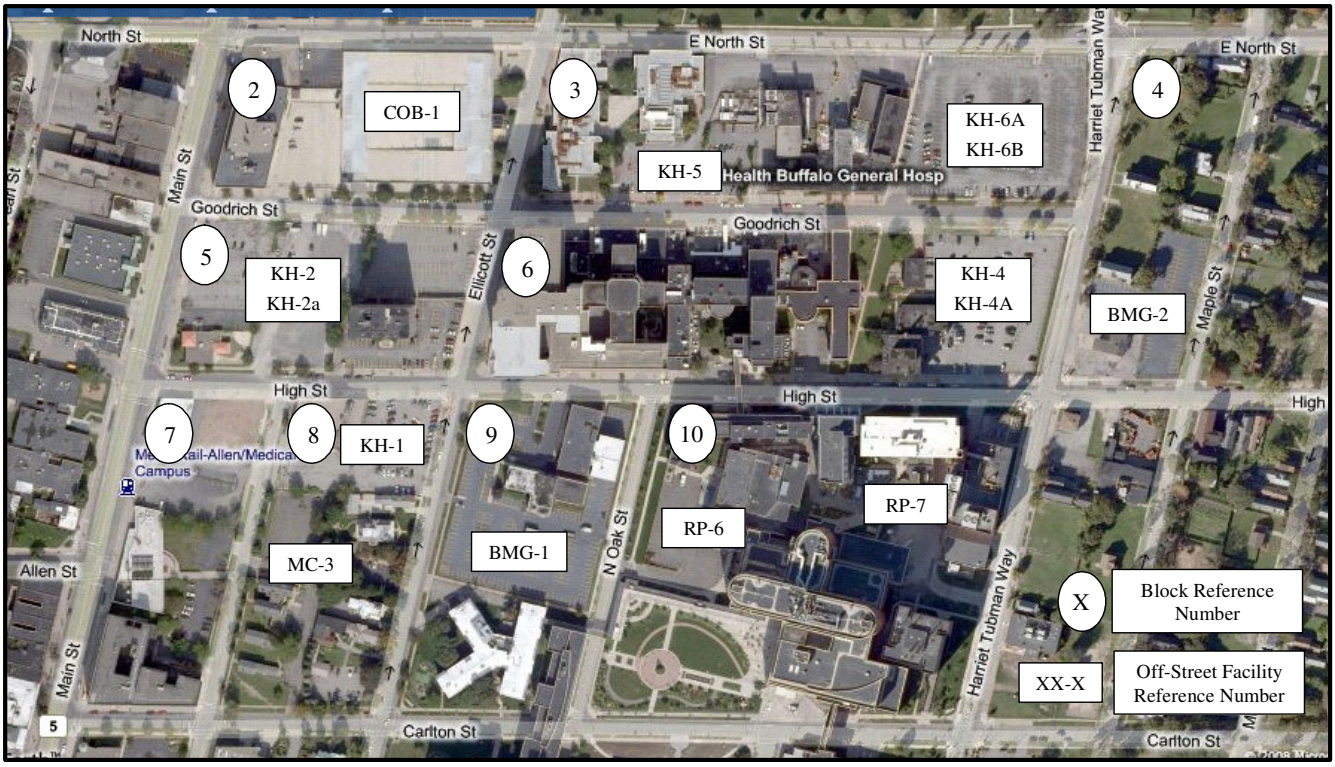
While LOS results indicate minimal capacity issues in the study area, some of the queue results may be indicative of poor operations. For example, the intersections along Michigan Avenue appear to be operating at acceptable levels but queue lengths for the through movements are noted as being over 400 feet long. If queue lengths are longer than the segment length associated with that movement, it would be that queues are spilling back into adjacent intersections affecting operations at those locations. Field observations by C&S along Michigan Avenue at the intersection of Goodell Street during the PM peak period noted that queues reached approximately 150 feet but cleared during each cycle of the signal.

The existing conditions SYNCHRO reports are included in Appendix D.

c) Parking Supply and Demand

The BNMC parking demand is serviced through separate employer owned facilities as well as public on- and off-street facilities. On- and off-street parking supply and demand data was collected by Walker Parking Consultants in July 2008 and documented in the *Draft Report: Existing Parking Conditions Technical Memorandum*, dated August 2008. Figure 5 below shows the North End Development area boundary, the existing parking facility locations with key numbers and block numbers for referencing on-street parking.

Figure 5: Existing Parking Facilities



Tables 3 and 4 display the current parking supply and demand information for the parking facilities in the North End Development area. Parking demand is determined from occupancy counts conducted at typically busy times. Walker counted the number of parked cars on-street and off-street at 9:00 a.m., 1:00 p.m., and 5:00 p.m. on Tuesday, July 8, 2008. The results of the occupancy counts are summarized in the following tables. The peak parking occupancy occurred at 1:00 p.m. Generally, parking occupancy at 85% is considered optimal. When occupancy levels are greater than 85%, parking is perceived as a problem.

Table 3: On-Street Parking Supply & Demand

BLOCK	BLOCK FACE				EXISTING SUPPLY & DEMAND		
	NORTH	EAST	SOUTH	WEST	CAPACITY	MAX DEMAND	UTILIZATION RATE
2	NORTH	ELLICOTT	GOODRICH	MAIN	48	8	17%
3	NORTH	MICHIGAN	GOODRICH	ELLICOTT	32	16	50%
4	NORTH	MAPLE	HIGH	MICHIGAN	33	4	12%
5	GOODRICH	ELLICOTT	HIGH	MAIN	3	0	0%
6	GOODRICH	MICHIGAN	HIGH	ELLICOTT	35	22	63%
7	HIGH	WASHINGTON	CARLTON	MAIN	54	17	31%
8	HIGH	ELLICOTT	CARLTON	WASHINGTON	26	14	54%
9	HIGH	OAK	CARLTON	ELLICOTT	0	0	0%
10	HIGH	MICHIGAN	CARLTON	OAK	20	18	90%
				TOTALS	**251**	**99**	**39%**

Table 4: Off-Street Parking Supply & Demand

LOT KEY	FACILITY OWNER	CAPACITY	MAX DEMAND	UTILIZATION RATE
COB-1	CITY OF BUFFALO	880	489	56%
KH-2	KALEIDA HEALTH	266	221	83%
KH-2A	KALEIDA HEALTH	46	18	39%
KH-5	KALEIDA HEALTH	60	71	118%
KH-6A	KALEIDA HEALTH	313	332	106%
KH-6B	KALEIDA HEALTH	161	157	98%
KH-4	KALEIDA HEALTH	176	281	160%
KH-4A	KALEIDA HEALTH	29	20	69%
BMG-2	BUFFALO MEDICAL GROUP	107	63	59%
MC-3	BUFFALO NIAGARA MEDICAL CENTER	63	25	40%
KH-1	KALEIDA HEALTH/LHI	80	55	69%
BMG-1	BNMC/BUFFALO MEDICAL GROUP	207	134	65%
RP-6	ROSWELL PARK CANCER INSTITUTE	42	22	52%
RP-7	ROSWELL PARK CANCER INSTITUTE	9	6	67%
	TOTALS	**2439**	**1894**	**78%**

Note: The 160% utilization rate indicated for lot KH-4 is due to a valet service and the double/triple stacking of vehicles in the parking lot.

The on-street parking is under-utilized at 39%. The off-street utilization is high at 78% for the area but not evenly distributed throughout the study area. Grey shading in the tables identifies locations where parking occupancy exceeds 85% and is considered to be at capacity.

The Walker report documents that "Buffalo Niagara Medical Campus as a whole currently operates with an occupancy of 80%; however, several select lots demonstrate occupancy of over 100%. These high-occupancy percentages may point to a need for the reallocation of parking resources or additions to the parking supply."

d) Public Transportation

The BNMC is currently serviced by four bus routes and a rail line operated by the Niagara Frontier Transportation Authority (NFTA) and two shuttle buses operated by the University at Buffalo (UB). There are over 30 bus stops within the campus and the Allen/Medical Campus Station is located at the intersection of Allen Street and Main Street on the western border of the BNMC boundary.

The University at Buffalo serves the campus with their Blue Line shuttle bus from downtown Buffalo and the Orange Line express service between UB's South Campus and the Allen/Medical Campus station.

e) Pedestrian Conditions

HSH obtained pedestrian counts at intersections within BNMC during the peak periods. It was noted that very few students or staff enter the campus as pedestrians, although sidewalks are available along all roadways. The most significant pedestrian volumes were observed crossing the north approach on Ellicott Street at High Street and crossing both approaches on Carlton Street at Elm Street.

Based on the SYNCHRO models provided by GBNRTC, there are no separate pedestrian phases at the signalized intersections in the study area. The existing pedestrian volumes were not included in the models and the pedestrian walk time and flash don't walk time were set at the defaults, 5 seconds and 11 seconds, respectively.

The AM and PM peak hour pedestrian counts are shown below in Figures 6 and 7 in Appendix A.

5) Evaluation of Long-Term (Design Year) Impacts

a) No-Build Scenario

The proposed developments are expected to be completed by 2013. Based on past traffic volume information collected on nearby New York State highways (see Appendix E), a compounded growth rate of 1.0% per year was applied to the existing traffic volumes to derive 2013 background volumes that account for any unknown development that may occur in the area in the next 5 years. Since the majority of development in this area is associated with the BNMC, this background growth would account for growth in areas adjacent to the campus that would affect the study intersections.

The City of Buffalo is expected to complete two projects within the next 5 years within campus boundaries: the Allen Street extension from Main Street to Ellicott Street and the conversion of Ellicott Street to a two-way roadway from Goodell Street to North Street.

The BNMC Master Plan created in 2003 recommended that Allen Street be extended past Main Street to Ellicott Street in order to "foster east to west connectivity through the BNMC". This extension creates a four-leg, four-approach intersection at Washington Street and a three-leg, three-approach intersection at Ellicott Street. For the purposes of this TIS, it is assumed that the intersection of Allen Street and Washington Street will be all-way stop controlled and that there will be a stop sign for the Allen Street approach at its intersection with Ellicott Street. Traffic was redistributed onto the Allen Street extension from adjacent roadways based on existing traffic patterns.

The Master Plan also recommended that Ellicott Street be converted to a two-way roadway to provide another southbound route from the campus. Based on information from the City of Buffalo, Ellicott Street will consist of one travel lane for each direction with parking lanes on both sides of the street, with no known changes to parking restrictions at this time. All existing signals along Ellicott Street will be modified to accommodate this change, but no new signals are expected at this time. For the purposes of this study, approximately 25% of the existing southbound traffic using Michigan Avenue and Washington Street during the AM and PM peak hours was redistributed to southbound Ellicott Street. The northbound traffic on Ellicott Street was not adjusted.

The 2013 AM and PM peak hour no-build scenario volumes are shown on Figures 8 and 9 in Appendix A.

A no-build scenario SYNCHRO model was created for each peak period in order to determine the effects of the background growth and Allen Street/Ellicott Street changes on the operations of study intersections. The LOS, delay in seconds, volume/capacity (v/c) ratio and 95th percentile queues for each approach of each study intersection for the no-build scenario are shown in Tables 7 & 8.

Table 7: No-Build Operations Summary – AM Peak Hour

No-Build Operations Summary: AM Peak Hour - Signalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Best Street	B	16.6		
Best EB left/thru/right	C	30.2	0.64	155
Best WB left/thru/right	C	31.4	0.66	163
Main NB left/thru | thru | thru/right	B	16.8	0.29	91
Main SB left/thru | thru | thru/right	A	4.6	0.18	53
Main Street/North Street	B	12.9		
North EB left/thru/right	C	23.8	0.61	139
North WB left/thru/right	C	22.4	0.44	106
Main NB left/thru | thru | thru/right	A	4.5	0.18	44
Main SB left/thru | thru | thru/right	B	10.3	0.3	86
Main Street/High Street	A	5.2		
High WB left/right	B	15.4	0.37	51
Main NB thru | thru | thru/right	A	6.4	0.19	58
Main SB left/thru | thru | thru	A	2.1	0.15	22
Main Street/Allen Street	B	12.5		
Allen EB left/thru/right	A	5.7	0.25	56
Allen WB left/thru/right	A	9.4	0.05	23
Main NB left/thru | thru | thru/right	B	14.3	0.15	50
Main SB left/thru | thru | thru/right	B	14.8	0.25	76
Main Street/Virginia Street	A	4.9		
Virginia EB left/thru/right	C	20.1	0.34	45
Virginia WB left/thru/right	B	16.2	0.09	18
Main NB left/thru | thru | thru/right	A	2.5	0.09	21
Main SB left/thru | thru | thru/right	A	2.1	0.09	16
Main Street/Goodell Street	C	25.9		
Goodell WB left/thru | thru | thru	A	5.9	0.50	91
Goodell WB right	A	5.7	0.24	48
Main NB left/thru	F	100.9	1.08	#405
Main SB soft right | soft right	C	28.4	0.52	138
Main SB right	A	6.5	0.22	15
Washington Street/Goodell Street	A	5.2		
Goodell WB left/thru | thru | thru | thru/right	A	1.5	0.34	13
Washington NB left/thru	B	18.2	0.43	161
Washington SB thru	B	19.4	0.18	71
Washington SB right	A	7.0	0.07	7
Washington Street/Tupper Street	B	10.4		
Tupper EB left/thru | thru | thru/right	A	0.3	0.22	0
Washington NB thru	B	19.3	0.17	66
Washington NB right	A	6.3	0.09	23
Washington SB left	C	25.0	0.25	68
Washington SB thru	C	26.9	0.41	137

No-Build Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Best Street	A	7.0		
Best EB left/thru	A	8.0	0.19	43
Best WB thru/right	A	7.0	0.23	46
Ellicott NB left/thru I thru/right	A	5.6	0.07	14
Ellicott Street/High Street	B	10.2		
High EB left/thru	B	11.9	0.21	64
High WB thru/right	B	11.9	0.29	76
Ellicott NB left/thru/right	A	9.1	0.42	110
Ellicott SB left/thru/right	A	7.8	0.07	27
Ellicott Street/Goodell Street	B	14.1		
Goodell WB left/thru I thru I thru I thru/right	B	13.5	0.68	232
Ellicott NB left/thru	B	16.6	0.42	86
Ellicott SB thru/right	B	19.4	0.24	92
Ellicott Street/Tupper Street	B	10.9		
Tupper EB left/thru I thru I thru/right	A	7.1	0.31	60
Ellicott NB thru/right I right	C	21.7	0.36	140
Ellicott NB right	A	5.6	0.13	13
Ellicott SB left/thru I thru	B	16.7	0.37	40
Elm Street/Tupper Street	B	18.0		
Tupper EB thru I thru	A	2.9	0.24	26
Elm NB thru I thru/right	C	30.9	0.68	203
Elm Street/Genesee Street	C	22.0		
Genesee EB left/thru I thru	D	36.1	0.27	88
Genesee WB thru I thru/right	C	31.3	0.19	70
Elm NB left/thru I thru I thru	C	21.8	0.63	628
Elm NB right	A	4.5	0.18	66
Elm Street/Sycamore Street	A	5.8		
Sycamore EB left/thru	D	39.3	0.29	105
Sycamore WB thru/right	D	38.0	0.34	135
Elm NB left/thru I thru I thru/right	A	2.6	0.64	43
Elm Street/Broadway Street	A	7.0		
Broadway EB left/thru I thru	C	33.4	0.18	61
Broadway WB thru I thru/right	C	33.8	0.33	123
Elm NB left/thru I thru I thru/right	A	2.6	0.72	38
Elm Street/William Street	A	6.4		
William EB left/thru I thru	D	35.4	0.10	40
William WB thru I thru/right	D	37.0	0.35	119
Elm NB left/thru I thru I thru/right	A	2.7	0.73	31
Elm Street/Clinton Street	A	6.4		
Clinton EB left/thru	D	35.3	0.34	124
Clinton WB thru/right	D	35.3	0.42	144
Elm NB left/thru I thru I thru/right	A	2.5	0.76	27

No-Build Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/North Division Street	A	8.1		
North Division WB thru I thru/right	C	32.8	0.22	82
Elm NB left/thru I thru I thru	A	6.7	0.85	104
Elm Street/South Division Street	B	15.6		
South Division EB left	D	46.3	0.48	165
South Division EB left/thru I thru	D	43.4	0.48	145
Elm NB thru I thru I thru/right	B	11.7	0.83	m25
Elm Street/Swan Street	D	44.9		
Swan WB thru/right	E	65.5	0.91	297
Elm NB left	A	5.5	0.50	111
Elm NB left/thru I thru I thru/right	D	49.0	1.05	781
Oak Street/Goodell Street	B	12.9		
Goodell WB left/thru I thru I thru I thru/right	B	12.7	0.72	308
Oak SB thru/right	C	20.6	0.12	53
Oak Street/Tupper Street	A	5.4		
Tupper EB thru I thru	A	3.3	0.23	22
Tupper EB right	A	0.6	0.16	1
Oak SB left/thru I thru	B	17.9	0.16	46
Oak Street/Genesee Street	B	11.0		
Genesee EB thru I thru/right	C	22.1	0.18	52
Genesee WB left/thru I thru	C	28.4	0.46	116
Oak SB left/thru I thru I thru	A	8.9	0.63	232
Oak SB right	A	3.2	0.34	59
Oak Street/Sycamore Street	A	9.2		
Sycamore EB thru/right	C	25.0	0.28	91
Sycamore WB left/thru	C	33.9	0.60	186
Oak SB left/thru I thru I thru/right	A	6.0	0.74	45
Oak Street/Broadway Street	A	9.8		
Broadway EB thru I thru/right	B	18.1	0.07	31
Broadway WB left/thru I thru	C	20.8	0.34	106
Oak SB left/thru I thru I thru/right	A	7.8	0.85	95
Oak Street/William Street	A	5.6		
William EB thru I thru/right	B	18.4	0.05	20
William WB left/thru I thru	C	25.5	0.38	105
Oak SB left/thru I thru I thru/right	A	2.3	0.65	20
Oak Street/Clinton Street	A	5.0		
Clinton EB thru/right	B	17.9	0.21	82
Clinton WB left/thru	B	20.0	0.27	105
Oak SB left/thru I thru I thru/right	A	3.0	0.74	13
Oak Street/North Division Street	A	8.8		
North Division WB left/thru I thru I thru	B	17.9	0.27	86
Oak SB thru I thru I thru/right	A	6.2	0.65	184

No-Build Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Oak Street/South Division Street	A	5.3		
South Division EB thru I thru I thru	B	17.2	0.13	45
South Division EB right	A	8.4	0.14	37
Oak SB left/thru I thru I thru I thru	A	3.1	0.40	31
Oak Street/Swan Street	B	13.9		
Swan EB right I right	A	3.2	0.03	7
Swan WB left	A	9.6	0.12	44
Swan WB thru I thru	B	17.1	0.47	178
Oak SB thru I thru I thru I thru/right	B	12.7	0.44	96
Michigan Avenue/Best Street	B	11.8		
Best EB left/thru/right	B	14.9	0.40	117
Best WB left/thru/right	B	15.1	0.32	96
Michigan NB left/thru/right	A	7.2	0.16	48
Michigan SB left/thru/right	A	8.1	0.24	70
Michigan Avenue/North Street	B	18.3		
North EB left/thru/right	B	18.5	0.25	63
North WB left/thru/right	D	40.6	0.77	#219
Michigan NB left/thru	A	4.3	0.13	35
Michigan NB right	A	1.7	0.03	7
Michigan SB left/thru/right	A	4.4	0.23	63
Michigan Avenue/High Street	A	7.1		
High EB left/thru/right	B	12.4	0.15	40
High WB left/thru/right	B	12.9	0.11	33
Michigan NB left/thru/right	A	7.8	0.44	113
Michigan SB left/thru I thru/right	A	4.2	0.18	34
Michigan Avenue/Carlton Street	A	7.9		
Carlton EB left/thru/right	B	13.9	0.19	34
Carlton WB left/thru/right	B	16.9	0.18	36
Michigan NB left/thru/right	A	4.1	0.47	97
Michigan SB left/thru/right	B	11.4	0.44	135
Michigan Avenue/Virginia Street	C	20.2		
Virginia EB left/thru/right	B	10.3	0.10	27
Michigan NB left/thru/right	C	25.8	0.90	#495
Michigan SB left/thru/right	A	5.8	0.26	71
Michigan Avenue/Goodell Street	C	21.6		
Goodell WB left/thru I thru I thru I thru/right	B	19.0	0.86	418
Michigan NB left	B	19.3	0.24	68
Michigan NB thru	C	32.6	0.78	#391
Michigan SB thru I thru/right	C	28.9	0.44	108
Michigan Avenue/Genesee Street	B	10.1		
Genesee EB left/thru I thru/right	B	10.7	0.27	52
Genesee WB left/thru/right	B	10.8	0.35	93
Michigan NB left/thru I thru/right	B	10.0	0.28	71
Michigan SB left/thru I thru/right	A	9.0	0.22	50

No-Build Operations Summary: AM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Goodrich Street				
Goodrich WB left/right	b	10.8	0.04	3
Main NB thru | thru | thru/right	a	0	0.14	0
Main SB left/thru | thru | thru	a	3.4	0.06	2
Main Street/Carlton Street				
Carlton WB left/right	b	10.6	0.09	8
Main NB thru | thru | thru/right	a	0	0.12	0
Main SB left/thru | thru | thru	a	2.1	0.11	9
Washington Street/High Street				
High EB thru/right	a	0	0.06	0
High WB left/thru	a	2.6	0.03	2
Washington NB left/right	a	9.1	0.03	2
Washington Street/Allen Street				
Allen EB left/thru/right	a	7.2	0.04	
Allen WB left/thru/right	a	7.2	0.03	
Washington NB left/thru/right	a	7.4	0.07	
Washington SB left/thru | thru/right	a	6.6	0.03	
Washington Street/Carlton Street				
Carlton EB left/thru/right	a	8.7	0.23	
Carlton WB left/thru/right	a	8.6	0.19	
Washington NB left/thru/right	a	8.3	0.11	
Washington SB left/thru | thru/right	a	7.5	0.06	
Ellicott Street/North Street				
North EB left/thru/right	a	8.3	0.15	
North WB left/thru/right	a	8.8	0.25	
Ellicott NB left/thru/right	a	8.5	0.16	
Ellicott Street/Goodrich Street				
Goodrich EB left/thru/right	a	8.4	0.10	
Goodrich WB left/thru/right	a	8.4	0.17	
Ellicott NB left/thru/right	b	9.3	0.31	
Ellicott SB left/thru/right	a	7.9	0.04	
Ellicott Street/Allen Street				
Allen EB left/right	b	10.5	0.05	9
Ellicott NB left/thru	a	0	0	0
Ellicott SB thru/right	a	0.2	0.06	0
Ellicott Street/Carlton Street				
Carlton EB left/thru/right	a	9.7	0.23	
Carlton WB left/thru/right	a	9.3	0.16	
Ellicott NB left/thru/right	b	12.1	0.48	
Ellicott SB left/thru/right	a	9.0	0.16	
Ellicott Street/Virginia Street				
Virginia WB left/right	b	11.7	0.11	9
Ellicott NB thru/right	a	0	0.25	0
Ellicott SB left/thru	a	0.4	0	0

No-Build Operations Summary: AM Peak Hour - Unsignalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Oak Street				
Ellicott NB thru/right	a	0	0.20	0
Ellicott SB left/thru	a	0.3	0	0
North Oak WB left/right	b	11.5	0.24	23
Michigan Avenue/Goodrich Street				
Goodrich EB left/right	b	13.5	0.07	6
Michigan NB left/thru	a	4.2	0.12	11
Michigan SB thru/right	a	0	0.24	0
Michigan Avenue/Cherry Street				
Michigan NB thru I thru/right	a	0	0.22	0
Michigan SB left/thru I thru	a	5.5	0.14	12
Elm Street/Virginia Street				
Virginia EB left/thru	a	3.2	0.02	2
Virginia WB thru/right	a	0	0.18	0
Elm SB left/right	b	10.2	0.06	5
Elm Street/Carlton Street				
Carlton EB thru/right	a	7.9	0.19	
Carlton WB left/thru	a	7.7	0.10	
Elm NB left/right	a	7.2	0.04	
Elm Street/Goodell Street				
Goodell WB thru I thru I thru I thru	a	0	0.31	0
Elm NB left I left	b	13.3	0.41	50

Table 8: No-Build Operations Summary – PM Peak Hour

No-Build Operations Summary: PM Peak Hour - Signalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Best Street	B	17.8		
Best EB left/thru/right	C	27.9	0.55	143
Best WB left/thru/right	C	30.5	0.66	182
Main NB left/thru I thru I thru/right	B	17.0	0.29	88
Main SB left/thru I thru I thru/right	A	5.0	0.20	61
Main Street/North Street	B	13.2		
North EB left/thru/right	C	29.0	0.66	141
North WB left/thru/right	C	22.8	0.51	122
Main NB left/thru I thru I thru/right	A	4.7	0.21	50
Main SB left/thru I thru I thru/right	B	11.8	0.33	108
Main Street/High Street	A	6.5		
High WB left/right	B	15.8	0.52	72
Main NB thru I thru I thru/right	A	7.5	0.18	55
Main SB left/thru I thru I thru	A	3.0	0.28	58

No-Build Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Allen Street	B	11.1		
Allen EB left/thru/right	A	7.3	0.24	57
Allen WB left/thru/right	B	12.2	0.05	24
Main NB left/thru I thru I thru/right	B	12.2	0.29	85
Main SB left/thru I thru I thru/right	B	10.9	0.20	65
Main Street/Virginia Street	A	8.6		
Virginia EB left/thru/right	B	11.5	0.26	65
Virginia WB left/thru/right	B	12.6	0.09	32
Main NB left/thru I thru I thru/right	A	7.2	0.14	31
Main SB left/thru I thru I thru/right	A	8.0	0.28	64
Main Street/Goodell Street	B	15.8		
Goodell WB left/thru I thru I thru	A	9.5	0.23	m83
Goodell WB right	A	8.5	0.11	m46
Main NB left/thru	B	16.8	0.20	66
Main SB soft right I soft right/right	C	29.0	0.60	153
Washington Street/Goodell Street	C	27.7		
Goodell WB left/thru I thru I thru I thru/right	A	3.7	0.16	22
Washington NB left/thru	E	65.9	0.99	#418
Washington SB thru	C	24.6	0.38	143
Washington SB right	A	8.4	0.05	7
Washington Street/Tupper Street	B	10.4		
Tupper EB left/thru I thru I thru/right	A	0.5	0.46	0
Washington NB thru	C	22.8	0.26	98
Washington NB right	A	9.7	0.17	43
Washington SB left	D	45.1	0.58	148
Washington SB thru	D	36.5	0.34	135
Ellicott Street/Best Street	A	7.7		
Best EB left/thru	A	9.7	0.38	84
Best WB thru/right	A	6.6	0.19	38
Ellicott NB left/thru I thru/right	A	5.4	0.13	20
Ellicott Street/High Street	A	9.6		
High WB left/thru/right	A	9.2	0.23	64
Ellicott NB left/thru/right	A	8.9	0.30	75
Ellicott SB left/thru/right	B	10.5	0.19	63
Ellicott Street/Goodell Street	B	11.5		
Goodell WB left/thru I thru I thru I thru/right	A	3.3	0.25	22
Ellicott NB left/thru	C	25.1	0.67	#83
Ellicott SB thru/left	C	27.4	0.53	208
Ellicott Street/Tupper Street	B	17.2		
Tupper EB left/thru I thru I thru/right	A	5.2	0.48	59
Ellicott NB thru/right I right	C	22.4	0.43	153
Ellicott NB right	C	20.7	0.41	89
Ellicott SB left/thru I thru	D	48.4	0.91dl	88

No-Build Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/Tupper Street	A	7.0		
Tupper EB thru I thru	A	5.0	0.63	86
Elm NB thru I thru/right	B	18.6	0.27	51
Elm Street/Genesee Street	A	8.9		
Genesee EB left/thru I thru	A	8.2	0.30	18
Genesee WB thru I thru/right	C	20.6	0.16	53
Elm NB left/thru I thru I thru	A	8.3	0.65	348
Elm NB right	A	0.1	0.06	m0
Elm Street/Sycamore Street	A	9.8		
Sycamore EB left/thru	D	39.5	0.49	m165
Sycamore WB thru/right	C	20.9	0.16	60
Elm NB left/thru I thru I thru/right	A	5.9	0.49	121
Elm Street/Broadway Street	A	5.6		
Broadway EB left/thru I thru	A	8.2	0.34	m27
Broadway WB thru I thru/right	B	14.8	0.10	36
Elm NB left/thru I thru I thru/right	A	4.3	0.52	50
Elm Street/William Street	A	8.3		
William EB left/thru I thru	C	28.6	0.39	80
William WB thru I thru/right	C	22.1	0.17	44
Elm NB left/thru I thru I thru/right	A	3.9	0.42	39
Elm Street/Clinton Street	B	14.3		
Clinton EB left/thru	D	45.6	0.78	232
Clinton WB thru/right	B	13.1	0.14	39
Elm NB left/thru I thru I thru/right	A	5.4	0.45	26
Elm Street/North Division Street	B	12.8		
North Division WB thru I thru/right	B	13.1	0.16	42
Elm NB left/thru I thru I thru	B	12.8	0.46	126
Elm Street/South Division Street	A	6.5		
South Division EB left	B	10.9	0.48	221
South Division EB left/thru I thru	A	7.9	0.41	154
Elm NB thru I thru I thru/right	A	4.1	0.28	35
Elm Street/Swan Street	B	16.1		
Swan WB thru/right	C	34.6	0.76	230
Elm NB left	A	1.7	0.11	12
Elm NB left/thru I thru I thru/right	A	7.7	0.27	79
Oak Street/Goodell Street	B	12.5		
Goodell WB left/thru I thru I thru I thru/right	A	7.2	0.29	82
Oak SB thru/right	C	30.2	0.57	244
Oak Street/Tupper Street	B	13.7		
Tupper EB thru I thru	B	13.9	0.76	517
Tupper EB right	A	1.8	0.25	m15
Oak SB left/thru I thru	B	19.8	0.57	104

No-Build Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Oak Street/Genesee Street	B	16.2		
Genesee EB thru I thru/right	C	24.6	0.45	147
Genesee WB left/thru I thru	B	15.6	0.26	m43
Oak SB left/thru I thru I thru	B	15.2	0.65	317
Oak SB right	A	3.3	0.15	35
Oak Street/Sycamore Street	A	8.2		
Sycamore EB thru/right	C	27.6	0.54	203
Sycamore WB left/thru	C	23.2	0.38	111
Oak SB left/thru I thru I thru/right	A	4.2	0.64	35
Oak Street/Broadway Street	A	8.5		
Broadway EB thru I thru/right	C	22.4	0.25	88
Broadway WB left/thru I thru	B	19.3	0.28	57
Oak SB left/thru I thru I thru/right	A	5.6	0.71	53
Oak Street/William Street	A	4.5		
William EB thru I thru/right	C	21.4	0.13	41
William WB left/thru I thru	C	21.4	0.29	55
Oak SB left/thru I thru I thru/right	A	1.9	0.64	24
Oak Street/Clinton Street	B	11.4		
Clinton EB thru/right	D	35.5	0.76	#348
Clinton WB left/thru	C	22.5	0.17	69
Oak SB left/thru I thru I thru/right	A	6.1	0.74	34
Oak Street/North Division Street	A	7.4		
North Division WB left/thru I thru I thru	B	16.1	0.09	33
Oak SB thru I thru I thru/right	A	6.8	0.77	52
Oak Street/South Division Street	B	11.7		
South Division EB thru I thru I thru	C	23.7	0.42	138
South Division EB right	D	45.3	0.86	#384
Oak SB left/thru I thru I thru I thru	A	1.6	0.60	12
Oak Street/Swan Street	B	11.1		
Swan EB right I right	C	32.0	0.64	181
Swan WB left	D	35.8	0.46	m129
Swan WB thru I thru	C	32.7	0.20	m57
Oak SB thru I thru I thru I thru/right	A	3.7	0.63	79
Michigan Avenue/Best Street	B	12.7		
Best EB left/thru/right	B	16.8	0.46	143
Best WB left/thru/right	B	13.7	0.26	77
Michigan NB left/thru/right	A	6.5	0.15	44
Michigan SB left/thru/right	A	7.0	0.10	33
Michigan Avenue/North Street	B	13.6		
North EB left/thru/right	C	26.7	0.52	105
North WB left/thru/right	C	29.8	0.51	95
Michigan NB left/thru	A	3.4	0.13	39
Michigan NB right	A	1.3	0.04	9
Michigan SB left/thru/right	A	3.4	0.17	50

No-Build Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Michigan Avenue/High Street	A	6.3		
High EB left/thru/right	B	12.2	0.22	51
High WB left/thru/right	B	14.3	0.07	25
Michigan NB left/thru/right	A	5.6	0.22	54
Michigan SB left/thru | thru/right	A	4.3	0.19	36
Michigan Avenue/Carlton Street	B	11.5		
Carlton EB left/thru/right	B	12.8	0.36	50
Carlton WB left/thru/right	B	16.8	0.18	35
Michigan NB left/thru/right	A	3.2	0.21	46
Michigan SB left/thru/right	B	15.1	0.59	198
Michigan Avenue/Virginia Street	A	6.4		
Virginia EB left/thru/right	A	6.9	0.27	43
Michigan NB left/thru/right	A	6.3	0.31	84
Michigan SB left/thru/right	A	6.2	0.31	87
Michigan Avenue/Goodell Street	C	30.4		
Goodell WB left/thru | thru | thru | thru/right	A	9.1	0.23	73
Michigan NB left	B	18.0	0.13	36
Michigan NB thru	C	20.6	0.33	141
Michigan SB thru | thru/right	E	59.9	0.96	#302
Michigan Avenue/Genesee Street	A	9.1		
Genesee EB left/thru | thru/right	A	9.3	0.15	36
Genesee WB left/thru/right	A	9.3	0.19	55
Michigan NB left/thru | thru/right	A	9.3	0.25	61
Michigan SB left/thru | thru/right	A	8.4	0.20	42

No-Build Operations Summary: PM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Goodrich Street		8.7		
Goodrich WB left/right	b	18.5	0.50	8
Main NB thru | thru | thru/right	c	22.9	0.50	0
Main SB left/thru | thru | thru	a	4	0.18	2
Main Street/Carlton Street		4		
Carlton WB left/right	b	12.5	0.32	34
Main NB thru | thru | thru/right	a	0	0.08	0
Main SB left/thru | thru | thru	a	3.3	0.18	5
Washington Street/High Street				
High EB thru/right	a	0	0.09	0
High WB left/thru	a	1.3	0.02	1
Washington NB left/right	b	10.7	0.08	7

No-Build Operations Summary: PM Peak Hour - Unsignalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Washington Street/Allen Street				
Allen EB left/thru/right	a	7.2	0.03	
Allen WB left/thru/right	a	7.2	0.03	
Washington NB left/thru/right	a	7.5	0.09	
Washington SB left/thru I thru/right	a	6.6	0.03	
Washington Street/Carlton Street				
Carlton EB left/thru/right	a	8.4	0.13	
Carlton WB left/thru/right	a	9.8	0.32	
Washington NB left/thru/right	a	8.8	0.14	
Washington SB left/thru I thru/right	a	7.8	0.09	
Ellicott Street/North Street				
North EB left/thru	a	9.6	0.22	
North WB thru/right	b	10.3	0.3	
Ellicott NB left/thru I thru/right	b	11.9	0.47	
Ellicott Street/Goodrich Street				
Goodrich EB left/thru/right	a	8.1	0.07	
Goodrich WB left/thru/right	a	8.5	0.17	
Ellicott NB left/thru/right	a	8.5	0.20	
Ellicott SB left/thru/right	a	8.3	0.13	
Ellicott Street/Allen Street				
Allen EB left/thru	b	10.5	0.04	3
Ellicott NB left/thru	a	0.3	0	0
Ellicott SB thru/right	a	0	0.13	0
Ellicott Street/Carlton Street				
Carlton EB left/thru/right	a	9.7	0.22	
Carlton WB left/thru/right	b	10.7	0.32	
Ellicott NB left/thru/right	b	10.5	0.31	
Ellicott SB left/thru/right	b	10.3	0.28	
Ellicott Street/Virginia Street				
Virginia WB left/right	b	13.3	0.22	21
Ellicott NB thru/right	a	0	0.19	0
Ellicott SB left/thru	a	0.2	0.00	0
Ellicott Street/Oak Street				
Ellicott NB thru/right	a	0	0.34	0
Ellicott SB left/thru	a	1.0	0.03	2
Oak WB left/right	b	11.3	0.08	7
Michigan Avenue/Goodrich Street				
Goodrich EB left/right	b	13.0	0.25	25
Michigan NB left/thru	a	0.9	0.02	1
Michigan SB thru/right	a	0	0.19	0
Michigan Avenue/Cherry Street				
Michigan NB thru I thru/right	a	0	0.16	0
Michigan SB left/thru I thru	a	9.9	0.45	60

No-Build Operations Summary: PM Peak Hour - Unsignalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/Virginia Street				
Virginia EB left/thru	a	0.7	0.00	0
Virginia WB thru/right	a	0	0.02	0
Elm SB left/right	b	11.0	0.35	39
Elm Street/Carlton Street				
Carlton EB thru/right	a	8.0	0.18	
Carlton WB left/thru	a	8.2	0.18	
Elm NB left/right	a	7.6	0.07	
Elm Street/Goodell Street				
Goodell WB thru I thru I thru I thru	a	0	0.13	0
Elm NB left I left	b	11.0	0.21	20

~ approach is above capacity and queues could be longer
# volumes for queue cycle exceeds capacity
m queue is metered by upstream signal
err - accurate delay can not be calculated due to level of failure

Based on the 2013 no-build conditions analysis, each movement at every study intersection is expected to operate at an acceptable level of service (LOS D or better) except for the movements previously noted in the existing conditions analysis:

No-Build AM

- Elm Street & Swan Street: LOS D (44.9)
  - Swan WB: LOS E (65.5)
- Main Street & Goodell Street: LOS C (25.9)
  - Main NB: LOS F (100.9)

No-Build PM

- Michigan Avenue & Goodell Street: LOS C (30.4)
  - Michigan SB: LOS E (59.9)
- Goodell Street & Washington Street: LOS C (27.7)
  - Washington NB: LOS E (65.9)

Due to the redistribution of southbound traffic to Ellicott Street, the LOS for the southbound Michigan Avenue approach at Goodell Street during the PM peak hour improves to a LOS E with 59.9 seconds of delay (85.6 second decrease in delay over existing conditions). For the same reason, the northbound Washington Street approach at Goodell Street during the PM peak improves to a LOS E with 65.9 seconds of delay (18.1 second decrease in delay over existing conditions).

The no-build scenario SYNCHRO reports are included in Appendix D.

b) Build Scenarios

i) Trip Generation

Using the Institute of Transportation Engineers (ITE) Trip Generation Manual 7th Edition, the number of total person trips generated by each type of use was estimated. Refer to Figure 1 in Appendix A for a BNMC boundary map with the proposed development locations. Table 9 shows the breakdown of the proposed developments and the corresponding ITE land use.

Table 9: Proposed Project Breakdown

Project		Land Use	ITE Land Use	Units	
GVI	GVI	Clinical Care	Hospital (610)	250.5	KSF
	UB/Jabobs Institute	Research	R&D Center (760)	160	KSF
	UB Clinical Research	Clinical Office	Medical/Dental OB (720)	15	KSF
	UB Incubator	General Office	General Office (710)	40	KSF
	BGH	Clinical Care	Hospital (610)	50	Beds
	Subtotal			465.5	KSF
				50	Beds
	Emergency Department (Removed-BGH)	Clinical Care	Hospital (610)	-10.4	KSF
	Cardiac Arrest (Removed-BGH)	Clinical Care	Hospital (610)	-17	KSF
Medical Office Bldg		Outpatient	Medical/Dental OB (720)	220	KSF
		Lab	Light Industrial (110)	40	KSF
		Retail	Shopping Center (820)	40	KSF
Kaleida Skilled Nursing Facility		Nursing Home	Nursing Home (620)	200	KSF
CMHC		Outpatient	Medical/Dental OB (720)	16.8	KSF**
GRAND TOTAL				**982.3**	**KSF**
				50	**Beds**

** Square footage of the CMHC shown is the difference between the existing facility and the proposed. The dialysis center/clinic is not shown since there is not expected to be a change in generated trips due to relocation.

The BNMC will be conducting a survey of employees and visitors to the campus in order to determine accurate and up-to-date mode share information. At the time of this study, this survey has not been completed. Therefore, mode share information from the 2000 Census Transportation Planning Package (CTPP) was compared for the Buffalo Metro Area and the BNMC. The table below shows that comparison:

Table 10: Mode Share Comparison

	BUFFALO METRO AREA	BNMC AREA
Drive Alone	77% *	66%
Carpool		9%
Transit	11%	21%
Walk/Bike/Other	5%	4%

* CTPP combined drive alone and carpool information for the commutes into Buffalo.

Source: Data from CTPP for City of Buffalo as calculated by Walker

Due to the age of the data (2000 Census) and the lack of local BNMC survey data, the more conservative percentages associated with the Buffalo Metro Area will be used for the purposes of this study. This is consistent with the parking analysis conducted as part of the HSH/Walker study.

The total trips for each use during the AM and PM peak hours were reduced by 23% to reflect the above-referenced auto mode share. The total new vehicle entering and exiting trips for all of the proposed developments are shown below:

Table 11: Trip Generation

Project		Land Use	ITE Land Use	AM PEAK HOUR		PM PEAK HOUR	
				TOTAL TRIPS	VEHICLE TRIPS	TOTAL TRIPS	VEHICLE TRIPS
GVI	GVI	Clinical Care	Hospital (610)	373	287	412	317
	UB/Jabobs Institute	Research	R&D Center (760)	210	162	195	150
	UB Clinical Research	Clinical Office	Medical/Dental OB (720)	37	29	56	43
	UB Incubator	General Office	General Office (710)	90	69	124	95
	BGH	Clinical Care	Hospital (610)	57	44	65	50
	Emergency Department (Removed)	Clinical Care	Hospital (610)	-12	-10	-12	-9
	Cardiac Arrest (Removed)	Clinical Care	Hospital (610)	-20	-16	-20	-15
Medical Office Bldg		Outpatient	Medical/Dental OB (720)	546	420	818	630
		Lab	Light Industrial (110)	37	28	39	30
		Retail*	Shopping Center (820)	23	17	85	66
Kaleida Skilled Nursing Facility		Nursing Home	Nursing Home (620)	76	59	84	65
CMHC		Outpatient	Medical/Dental OB (720)	42	32	62	48
			GRAND TOTAL	**1457**	**1122**	**1908**	**1469**

* Trips associated with support retail in MOB were reduced by 75% to account for internal capture.

AM Peak Hour		PM Peak Hour	
Entering	Exiting	Entering	Exiting
850	275	415	1055

The detailed breakdown of the estimated new trip calculations for each proposed development is shown in Appendix F.

ii) Internal Trip Distribution

Since the final location of the proposed parking structure has not been determined, two different future scenario distributions are analyzed in this study:

- ***Future Scenario #1*** places the parking structure at Site B on Ellicott Street between Goodrich Street and High Street. This is also the proposed location of the MOB. To be conservative, it is assumed that the MOB will still be built within the campus within the next 5 years but at an unknown location. Therefore, the estimated trips to be generated by the MOB will still be included in the analysis and will be directed towards the proposed parking structure. This will also provide consistency in the proposed development trip generation volumes between the two scenarios for more accurate comparison between the two. There are assumed full access points on High Street and on Ellicott Street for this structure location.

  This scenario also addresses the general distribution for the location of the proposed parking facility on Sites I and J. The primary difference is that the access/egress for these sites is located on Ellicott Street between Carlton Street and High Street for Site I and on Ellicott Street between Goodrich Street and North Street for Site J.

- ***Future Scenario #2*** places the parking structure at Site F (on Michigan Avenue between Goodrich Street and High Street) or Site G (on Michigan Avenue between Goodrich Street and North Street). It is assumed that the full access point for the parking structure at either site will be where Goodrich Street currently intersects Michigan Avenue. Therefore, only one trip distribution was created for the two possible locations.

Other distribution assumptions are as described below:

- Both scenarios include the full build-out of the proposed developments, as well as, the closure of Goodrich Street from Ellicott Street to Michigan Avenue. There are a number of curb cuts along this segment of Goodrich Street that serve parking areas, emergency vehicles and loading docks. For the purposes of this study, it is assumed that the east end of Goodrich Street will remain open to provide access for loading docks and emergency vehicles and for access to the existing surface lots in scenario #1 or for the proposed parking structure and remaining surface lot in scenario #2.

- Due to the relocation of the CMHC, dialysis center and clinic from Goodrich Street to Main Street, the current trips associated with these

facilities will be redistributed to Main Street. It is assumed that the access to the proposed parking at 1010 and 1026-1028 Main Street will be across from Goodrich Street on Main Street. The trips associated with the increase in the CMHC will be distributed towards the proposed parking structure for the different scenarios.

- The proposed SNF is expected to have 75 on-site parking spaces. Therefore, 75 trips will be distributed to the assumed parking lot access across from the existing Goodrich Street on Michigan Avenue. The remaining trips will be distributed towards the proposed parking structure for the different scenarios.

- The proposed MOB is expected to have 200 on-site parking spaces. In future Scenario #1, all associated trips are assumed to use the proposed parking structure due to the unknown location of the MOB. In future Scenario #2, 200 trips will be distributed to the MOB site and the remainder will be distributed to the proposed parking structure.

- All of the estimated trips generated by the proposed GVI will be distributed to the proposed parking structure for the different scenarios.

The new trips were distributed throughout the study area based on the external distribution and the destinations in each scenario. The project trips for the AM and PM peak hours of the two future scenarios are shown in Figures 14 through 17 and the total future trips are shown in Figure 18 through 21 in Appendix A.

iii) Build Scenario Operations

The two build scenario traffic volumes were calculated by adding the project trips to the no-build traffic volumes. SYNCHRO models were created to determine the impact of the additional project trips and redistribution of traffic on the study area intersections. For these models, no geometric changes or signal timing/phasing adjustments were made except for the changes due to the closure of Goodrich as described in Section 5.b.ii. The LOS, delay in seconds, volume/capacity (v/c) ratio and 95th percentile queues for each approach of each study intersection for future scenarios #1 and #2 are shown in Tables 12 through 15. A comparison of operations for each condition (existing, no-build, scenario #1 and scenario #2) is included in Appendix D.

Table 12: Future Scenario #1 Operations Summary – AM Peak Hour

Scenario #1 Operations Summary: AM Peak Hour - Signalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Best Street	B	16.4		
Best EB left/thru/right	C	29.8	0.64	155
Best WB left/thru/right	C	31.3	0.67	166
Main NB left/thru I thru I thru/right	B	17.2	0.30	96
Main SB left/thru I thru I thru/right	A	4.7	0.20	58
Main Street/North Street	B	14.7		
North EB left/thru/right	C	26.1	0.67	178
North WB left/thru/right	C	22.0	0.45	120
Main NB left/thru I thru I thru/right	A	5.6	0.21	57
Main SB left/thru I thru I thru/right	B	12.4	0.35	110
Main Street/High Street	A	5.7		
High WB left/right	B	16.2	0.45	63
Main NB thru I thru I thru/right	A	6.7	0.22	65
Main SB left/thru I thru I thru	A	2.4	0.18	28
Main Street/Allen Street	B	13.0		
Allen EB left/thru/right	A	9.3	0.33	93
Allen WB left/thru/right	A	9.4	0.05	23
Main NB left/thru I thru I thru/right	B	14.3	0.15	50
Main SB left/thru I thru I thru/right	B	14.6	0.26	78
Main Street/Virginia Street	A	4.9		
Virginia EB left/thru/right	C	20.1	0.34	45
Virginia WB left/thru/right	B	16.2	0.09	18
Main NB left/thru I thru I thru/right	A	2.5	0.09	21
Main SB left/thru I thru I thru/right	A	2.1	0.09	16
Main Street/Goodell Street	C	26.1		
Goodell WB left/thru I thru I thru	A	6.2	0.50	106
Goodell WB right	A	6.0	0.24	56
Main NB left/thru	F	100.9	1.08	#405
Main SB soft right I soft right	C	28.4	0.52	138
Main SB right	A	6.5	0.22	15
Washington Street/Goodell Street	A	5.7		
Goodell WB left/thru I thru I thru I thru/right	A	1.7	0.34	15
Washington NB left/thru	B	17.0	0.51	196
Washington SB thru	B	19.8	0.21	80
Washington SB right	A	7.0	0.07	7
Washington Street/Tupper Street	B	11.5		
Tupper EB left/thru I thru I thru/right	A	0.3	0.22	0
Washington NB thru	C	20.4	0.26	93
Washington NB right	A	6.3	0.09	23
Washington SB left	C	26.4	0.28	69
Washington SB thru	C	27.9	0.43	143

Scenario #1 Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Best Street	A	7.0		
Best EB left/thru	A	8.0	0.19	43
Best WB thru/right	A	7.0	0.23	46
Ellicott NB left/thru I thru/right	A	5.6	0.07	14
Ellicott Street/High Street	D	38.5		
High EB left/thru/right	B	12.0	0.22	67
High WB left/thru/right	B	14.5	0.42	128
Ellicott NB left/thru/right	E	59.4	1.04	#561
Ellicott SB left/thru/right	A	9.5	0.29	90
Ellicott Street/Goodell Street	D	36.8		
Goodell WB left/thru I thru I thru I thru/right	D	39.8	0.90dr	319
Ellicott NB left/thru	B	16.6	0.50	91
Ellicott SB thru/left	C	22.7	0.42	160
Ellicott Street/Tupper Street	B	14.4		
Tupper EB left/thru I thru I thru/right	A	7.0	0.31	60
Ellicott NB thru/right I right	C	23.1	0.44	170
Ellicott NB right	A	5.6	0.13	13
Ellicott SB left/thru I thru	C	26.9	0.66	62
Elm Street/Tupper Street	C	24.4		
Tupper EB thru I thru	A	3.4	0.29	37
Elm NB thru I thru/right	D	41.4	0.88	#308
Elm Street/Genesee Street	C	23.0		
Genesee EB left/thru I thru	D	36.1	0.27	88
Genesee WB thru I thru/right	C	31.8	0.19	71
Elm NB left/thru I thru I thru	C	23.0	0.68	689
Elm NB right	A	3.9	0.18	m55
Elm Street/Sycamore Street	A	6.0		
Sycamore EB left/thru	D	39.3	0.29	105
Sycamore WB thru/right	D	38.0	0.34	135
Elm NB left/thru I thru I thru/right	A	3.0	0.69	71
Elm Street/Broadway Street	A	7.0		
Broadway EB left/thru I thru	C	33.4	0.18	61
Broadway WB thru I thru/right	C	34.1	0.33	123
Elm NB left/thru I thru I thru/right	A	2.9	0.77	54
Elm Street/William Street	A	6.5		
William EB left/thru I thru	D	35.4	0.10	40
William WB thru I thru/right	D	37.5	0.35	120
Elm NB left/thru I thru I thru/right	A	2.9	0.78	32
Elm Street/Clinton Street	A	6.3		
Clinton EB left/thru	D	35.3	0.34	124
Clinton WB thru/right	D	35.7	0.42	145
Elm NB left/thru I thru I thru/right	A	2.6	0.81	26
Elm Street/North Division Street	B	12.2		
North Division WB thru I thru/right	C	33.4	0.22	83
Elm NB left/thru I thru I thru	B	11.1	0.91	256

Scenario #1 Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/South Division Street	C	34.6		
South Division EB left	D	46.6	0.48	165
South Division EB left/thru I thru	D	43.6	0.48	146
Elm NB thru I thru I thru/right	C	33.3	0.87	m24
Elm Street/Swan Street	E	66.4		
Swan WB thru/right	E	65.5	0.91	297
Elm NB left	A	5.5	0.50	111
Elm NB left/thru I thru I thru/right	E	75.8	1.11	#1049
Oak Street/Goodell Street	B	16.5		
Goodell WB left/thru I thru I thru I thru/right	B	16.2	0.85	426
Oak SB thru/right	C	23.6	0.28	114
Oak Street/Tupper Street	A	7.8		
Tupper EB thru I thru	A	5.9	0.27	67
Tupper EB right	A	0.8	0.16	m3
Oak SB left/thru I thru	B	17.4	0.25	65
Oak Street/Genesee Street	B	11.1		
Genesee EB thru I thru/right	C	22.5	0.18	52
Genesee WB left/thru I thru	C	28.4	0.46	116
Oak SB left/thru I thru I thru	A	9.0	0.64	238
Oak SB right	A	3.1	0.34	58
Oak Street/Sycamore Street	A	9.3		
Sycamore EB thru/right	C	25.2	0.28	92
Sycamore WB left/thru	C	33.9	0.60	186
Oak SB left/thru I thru I thru/right	A	6.1	0.76	45
Oak Street/Broadway Street	B	10.7		
Broadway EB thru I thru/right	B	18.1	0.07	31
Broadway WB left/thru I thru	C	20.8	0.34	106
Oak SB left/thru I thru I thru/right	A	8.9	0.87	102
Oak Street/William Street	A	5.7		
William EB thru I thru/right	B	18.4	0.05	20
William WB left/thru I thru	C	25.5	0.38	105
Oak SB left/thru I thru I thru/right	A	2.5	0.67	20
Oak Street/Clinton Street	A	5.1		
Clinton EB thru/right	B	18.0	0.21	82
Clinton WB left/thru	B	20.0	0.27	105
Oak SB left/thru I thru I thru/right	A	3.1	0.76	13
Oak Street/North Division Street	A	5.8		
North Division WB left/thru I thru I thru	B	17.9	0.27	86
Oak SB thru I thru I thru/right	A	2.5	0.67	21
Oak Street/South Division Street	A	4.2		
South Division EB thru I thru I thru	B	17.2	0.13	45
South Division EB right	A	9.6	0.14	40
Oak SB left/thru I thru I thru I thru	A	1.7	0.42	13

Scenario #1 Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Oak Street/Swan Street	B	11.4		
Swan EB right I right	A	4.2	0.03	8
Swan WB left	B	10.2	0.12	45
Swan WB thru I thru	B	17.1	0.47	178
Oak SB thru I thru I thru I thru/right	A	8.6	0.47	74
Michigan Avenue/Best Street	B	11.7		
Best EB left/thru/right	B	14.9	0.40	117
Best WB left/thru/right	B	15.1	0.32	96
Michigan NB left/thru/right	A	7.5	0.18	53
Michigan SB left/thru/right	A	8.6	0.29	87
Michigan Avenue/North Street	C	21.5		
North EB left/thru/right	B	19.8	0.27	71
North WB left/thru/right	D	48.5	0.86	#276
Michigan NB left/thru	A	4.5	0.14	39
Michigan NB right	A	1.6	0.03	7
Michigan SB left/thru/right	A	4.9	0.28	77
Michigan Avenue/High Street	A	8.6		
High EB left/thru/right	B	12.0	0.16	41
High WB left/thru/right	B	12.9	0.11	33
Michigan NB left/thru/right	B	11.4	0.62	180
Michigan SB left/thru I thru/right	A	3.9	0.20	36
Michigan Avenue/Carlton Street	A	8.1		
Carlton EB left/thru/right	B	13.9	0.19	34
Carlton WB left/thru/right	B	16.9	0.18	36
Michigan NB left/thru/right	A	4.8	0.54	126
Michigan SB left/thru/right	B	11.7	0.46	142
Michigan Avenue/Virginia Street	C	32.3		
Virginia EB left/thru/right	B	10.3	0.10	27
Michigan NB left/thru/right	D	42.1	0.99	#577
Michigan SB left/thru/right	A	5.9	0.28	76
Michigan Avenue/Goodell Street	C	29.0		
Goodell WB left/thru I thru I thru I thru/right	C	28.0	0.97	#601
Michigan NB left	B	19.5	0.26	71
Michigan NB thru	D	36.4	0.83	#457
Michigan SB thru I thru/right	C	29.7	0.46	115
Michigan Avenue/Genesee Street	B	10.2		
Genesee EB left/thru I thru/right	B	10.7	0.27	52
Genesee WB left/thru/right	B	10.8	0.35	93
Michigan NB left/thru I thru/right	B	10.3	0.31	79
Michigan SB left/thru I thru/right	A	9.2	0.23	53

Scenario #1 Operations Summary: AM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Goodrich Street				
CMHC Driveway EB left/thru/right	b	11.7	0.02	2
Goodrich WB left/right	b	11.4	0.05	4
Main NB thru | thru | thru/right	a	0.6	0.11	2
Main SB left/thru | thru | thru	a	0.1	0.08	0
Main Street/Carlton Street				
Carlton WB left/right	b	10.6	0.09	8
Main NB thru | thru | thru/right	a	0.0	0.12	0
Main SB left/thru | thru | thru	a	2.1	0.11	9
Washington Street/High Street				
High EB thru/right	a	0.0	0.11	0
High WB left/thru	a	2.7	0.04	3
Washington NB left/right	a	9.7	0.09	7
Washington Street/Allen Street				
Allen EB left/thru/right	a	7.4	0.04	
Allen WB left/thru/right	a	7.4	0.03	
Washington NB left/thru/right	a	7.8	0.13	
Washington SB left/thru | thru/right	a	6.7	0.04	
Washington Street/Carlton Street				
Carlton EB left/thru/right	a	9.0	0.24	
Carlton WB left/thru/right	a	8.8	0.20	
Washington NB left/thru/right	a	8.9	0.17	
Washington SB left/thru | thru/right	a	7.7	0.07	
Ellicott Street/North Street				
North EB left/thru	a	8.9	0.22	
North WB thru/right	b	10.3	0.37	
Ellicott NB left/thru | thru/right	a	9.3	0.21	
Ellicott Street/Goodrich Street				
Goodrich EB left/thru/right	a	8.3	0.05	
Ellicott NB left/thru/right	a	8.9	0.28	
Ellicott SB left/thru/right	a	8.2	0.18	
Ellicott Street/Allen Street				
Allen EB left/thru	c	19.8	0.12	10
Ellicott NB left/thru	a	0.1	0.00	0
Ellicott SB thru/right	a	0.0	0.18	0
Ellicott Street/Carlton Street				
Carlton EB left/thru/right	b	12.5	0.30	
Carlton WB left/thru/right	b	11.7	0.21	
Ellicott NB left/thru/right	f	197.5	1.38	
Ellicott SB left/thru/right	b	14.6	0.50	

Scenario #1 Operations Summary: AM Peak Hour - Unsignalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Oak Street				
Ellicott NB thru/right	a	0.0	0.53	0
Ellicott SB left/thru	a	4.1	0.13	11
Oak WB left/right	d	25.0	0.49	65
Michigan Avenue/Goodrich Street				
Goodrich EB left/right	c	23.2	0.43	51
SNF Driveway WB left/thru/right	c	18.4	0.09	8
Michigan NB left/thru	a	4.3	0.14	12
Michigan SB thru/right	a	0.3	0.01	1
Michigan Avenue/Cherry Street				
Michigan NB thru I thru/right	a	0.0	0.24	0
Michigan SB left/thru I thru	a	2.8	0.15	12
Elm Street/Virginia Street				
Virginia EB left/thru	a	3.2	0.02	2
Virginia WB thru/right	a	0.0	0.18	0
Elm SB left/right	b	10.2	0.06	5
Elm Street/Carlton Street				
Carlton EB thru/right	a	7.9	0.19	
Carlton WB left/thru	a	7.7	0.10	
Elm NB left/right	a	7.2	0.04	
Elm Street/Goodell Street				
Goodell WB thru I thru I thru I thru	a	0.0	0.36	0
Elm NB left I left	c	22.6	0.67	126
High Street/Structure Driveway				
High EB shared left/thru	a	5.3	0.11	10
High WB shared thru/right	a	0.0	0.19	0
Driveway SB shared left/right	a	10.0	0.06	5
Ellicott Street/Structure Driveway				
Driveway EB shared left/right	e	42.2	0.73	133
Ellicott NB shared left/thru	a	7.7	0.39	47
Ellicott SB shared thru/right	a	0.0	0.09	0

Table 13: Future Scenario #1 Operations Summary – PM Peak Hour

Scenario #1 Operations Summary: PM Peak Hour - Signalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Best Street	B	17.8		
Best EB left/thru/right	C	28.1	0.56	147
Best WB left/thru/right	C	30.5	0.66	182
Main NB left/thru I thru I thru/right	B	17.4	0.33	100
Main SB left/thru I thru I thru/right	A	5.1	0.21	65
Main Street/North Street	B	14.8		
North EB left/thru/right	C	31.5	0.71	158
North WB left/thru/right	C	25.4	0.59	153
Main NB left/thru I thru I thru/right	A	5.2	0.24	61
Main SB left/thru I thru I thru/right	B	12.9	0.36	120
Main Street/High Street	B	10.9		
High WB left/right	C	24.6	0.68	156
Main NB thru I thru I thru/right	B	10.0	0.21	72
Main SB left/thru I thru I thru	A	5.3	0.33	97
Main Street/Allen Street	B	10.9		
Allen EB left/thru/right	A	9.2	0.28	73
Allen WB left/thru/right	B	12.2	0.05	24
Main NB left/thru I thru I thru/right	B	12.3	0.29	85
Main SB left/thru I thru I thru/right	A	9.5	0.24	68
Main Street/Virginia Street	A	8.6		
Virginia EB left/thru/right	B	11.5	0.26	65
Virginia WB left/thru/right	B	12.6	0.09	32
Main NB left/thru I thru I thru/right	A	7.2	0.14	31
Main SB left/thru I thru I thru/right	A	8.0	0.28	64
Main Street/Goodell Street	B	15.9		
Goodell WB left/thru I thru I thru	A	9.7	0.23	m83
Goodell WB right	A	8.6	0.11	m46
Main NB left/thru	B	16.8	0.20	66
Main SB soft right I soft right/right	C	29.0	0.60	153
Washington Street/Goodell Street	D	48.7		
Goodell WB left/thru I thru I thru I thru/right	A	4.0	0.16	m23
Washington NB left/thru	F	127.6	1.17	#477
Washington SB thru	C	26.5	0.48	181
Washington SB right	A	8.4	0.05	7
Washington Street/Tupper Street	B	12.1		
Tupper EB left/thru I thru I thru/right	A	0.5	0.46	0
Washington NB thru	C	23.4	0.31	112
Washington NB right	A	9.7	0.17	43
Washington SB left	D	47.8	0.62	151
Washington SB thru	D	39.4	0.46	175

Scenario #1 Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Best Street	A	7.7		
Best EB left/thru	A	9.7	0.38	84
Best WB thru/right	A	6.6	0.19	38
Ellicott NB left/thru I thru/right	A	5.4	0.13	20
Ellicott Street/High Street	F	127.6		
High EB left/thru/right	B	11.8	0.38	114
High WB left/thru/right	B	10.0	0.28	77
Ellicott NB left/thru/right	F	325.9	1.65	#332
Ellicott SB left/thru/right	F	83.7	1.10	#575
Ellicott Street/Goodell Street	F	198.2		
Goodell WB left/thru I thru I thru I thru/right	A	2.3	0.32	7
Ellicott NB left/thru	F	1308.2	3.80	#362
Ellicott SB thru/left	F	151.3	1.24	#698
Ellicott Street/Tupper Street	F	145.5		
Tupper EB left/thru I thru I thru/right	A	5.3	0.48	59
Ellicott NB thru/right I right	C	23.6	0.45	165
Ellicott NB right	C	21.3	0.44	94
Ellicott SB left/thru I thru	F	395.9	2.67dl	#236
Elm Street/Tupper Street	B	13.8		
Tupper EB thru I thru	B	10.4	0.83	m182
Elm NB thru I thru/right	C	32.9	0.37	94
Elm Street/Genesee Street	A	5.0		
Genesee EB left/thru I thru	A	7.9	0.30	m17
Genesee WB thru I thru/right	C	21.0	0.16	54
Elm NB left/thru I thru I thru	A	3.6	0.68	61
Elm NB right	A	0.1	0.06	m0
Elm Street/Sycamore Street	C	22.7		
Sycamore EB left/thru	D	51.3	0.49	m166
Sycamore WB thru/right	C	20.9	0.16	60
Elm NB left/thru I thru I thru/right	B	19.7	0.51	371
Elm Street/Broadway Street	A	5.6		
Broadway EB left/thru I thru	A	8.0	0.34	m26
Broadway WB thru I thru/right	B	14.8	0.10	36
Elm NB left/thru I thru I thru/right	A	4.3	0.55	52
Elm Street/William Street	A	8.0		
William EB left/thru I thru	C	28.0	0.39	m77
William WB thru I thru/right	C	22.1	0.17	44
Elm NB left/thru I thru I thru/right	A	3.9	0.45	39
Elm Street/Clinton Street	B	13.9		
Clinton EB left/thru	D	45.4	0.78	232
Clinton WB thru/right	B	13.1	0.14	39
Elm NB left/thru I thru I thru/right	A	5.5	0.48	27

Scenario #1 Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/North Division Street	B	13.3		
North Division WB thru I thru/right	B	14.6	0.16	45
Elm NB left/thru I thru I thru	B	13.2	0.49	272
Elm Street/South Division Street	A	6.5		
South Division EB left	B	10.9	0.48	221
South Division EB left/thru I thru	A	7.9	0.41	154
Elm NB thru I thru I thru/right	A	4.1	0.28	35
Elm Street/Swan Street	B	16.1		
Swan WB thru/right	C	34.6	0.76	230
Elm NB left	A	1.7	0.11	12
Elm NB left/thru I thru I thru/right	A	7.7	0.27	79
Oak Street/Goodell Street	D	46.4		
Goodell WB left/thru I thru I thru I thru/right	A	8.2	0.36	112
Oak SB thru/right	F	123.3	1.17	m#603
Oak Street/Tupper Street	C	28.0		
Tupper EB thru I thru	C	26.5	0.91	m519
Tupper EB right	A	6.8	0.26	m67
Oak SB left/thru I thru	D	38.7	0.97	m126
Oak Street/Genesee Street	B	18.9		
Genesee EB thru I thru/right	C	24.9	0.45	148
Genesee WB left/thru I thru	B	13.7	0.26	m38
Oak SB left/thru I thru I thru	B	19.2	0.72	m383
Oak SB right	A	4.4	0.15	m35
Oak Street/Sycamore Street	A	8.3		
Sycamore EB thru/right	C	28.3	0.55	206
Sycamore WB left/thru	C	26.1	0.38	124
Oak SB left/thru I thru I thru/right	A	4.4	0.72	35
Oak Street/Broadway Street	A	8.7		
Broadway EB thru I thru/right	C	22.4	0.25	88
Broadway WB left/thru I thru	B	19.3	0.28	57
Oak SB left/thru I thru I thru/right	A	6.1	0.79	53
Oak Street/William Street	A	4.4		
William EB thru I thru/right	C	22.5	0.13	42
William WB left/thru I thru	C	21.3	0.29	55
Oak SB left/thru I thru I thru/right	A	2.0	0.71	23
Oak Street/Clinton Street	B	11.6		
Clinton EB thru/right	D	35.9	0.76	#350
Clinton WB left/thru	C	22.6	0.17	69
Oak SB left/thru I thru I thru/right	A	6.8	0.82	34
Oak Street/North Division Street	A	7.9		
North Division WB left/thru I thru I thru	B	16.7	0.09	33
Oak SB thru I thru I thru/right	A	7.3	0.85	52

Scenario #1 Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Oak Street/South Division Street	B	11.7		
South Division EB thru I thru I thru	C	23.7	0.42	138
South Division EB right	D	45.3	0.86	#384
Oak SB left/thru I thru I thru I thru	A	1.6	0.60	11
Oak Street/Swan Street	B	11.1		
Swan EB right I right	C	32.0	0.64	181
Swan WB left	D	35.8	0.46	m129
Swan WB thru I thru	C	32.7	0.20	m57
Oak SB thru I thru I thru I thru/right	A	3.7	0.63	79
Michigan Avenue/Best Street	B	12.3		
Best EB left/thru/right	B	16.8	0.46	143
Best WB left/thru/right	B	13.7	0.26	77
Michigan NB left/thru/right	A	7.4	0.20	61
Michigan SB left/thru/right	A	7.1	0.13	39
Michigan Avenue/North Street	B	14.6		
North EB left/thru/right	C	29.7	0.60	136
North WB left/thru/right	C	30.2	0.54	111
Michigan NB left/thru	A	4.0	0.17	52
Michigan NB right	A	1.3	0.06	10
Michigan SB left/thru/right	A	3.8	0.19	56
Michigan Avenue/High Street	A	7.5		
High EB left/thru/right	B	15.1	0.41	90
High WB left/thru/right	B	14.3	0.07	25
Michigan NB left/thru/right	A	6.0	0.27	65
Michigan SB left/thru I thru/right	A	4.3	0.21	38
Michigan Avenue/Carlton Street	B	12.5		
Carlton EB left/thru/right	B	12.8	0.36	50
Carlton WB left/thru/right	B	16.8	0.18	35
Michigan NB left/thru/right	A	3.4	0.24	55
Michigan SB left/thru/right	B	17.4	0.66	#266
Michigan Avenue/Virginia Street	A	6.7		
Virginia EB left/thru/right	A	6.9	0.27	43
Michigan NB left/thru/right	A	6.7	0.35	97
Michigan SB left/thru/right	A	6.7	0.37	105
Michigan Avenue/Goodell Street	D	37.5		
Goodell WB left/thru I thru I thru I thru/right	A	9.6	0.29	91
Michigan NB left	B	18.0	0.13	36
Michigan NB thru	C	21.0	0.36	154
Michigan SB thru I thru/right	F	81.7	1.05	#343
Michigan Avenue/Genesee Street	A	9.3		
Genesee EB left/thru I thru/right	A	9.3	0.15	36
Genesee WB left/thru/right	A	9.3	0.19	55
Michigan NB left/thru I thru/right	A	9.5	0.26	65
Michigan SB left/thru I thru/right	A	9.0	0.24	52

Scenario #1 Operations Summary: PM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Goodrich Street				
CMHC Driveway EB left/thru/right	b	14.2	0.12	11
Goodrich WB left/right	b	13.1	0.12	10
Main NB thru | thru | thru/right	a	0.2	0.17	1
Main SB left/thru | thru | thru	a	0.4	0.15	1
Main Street/Carlton Street				
Carlton WB left/right	b	12.6	0.32	35
Main NB thru | thru | thru/right	a	0.0	0.08	0
Main SB left/thru | thru | thru	a	1.4	0.18	5
Washington Street/High Street				
High EB thru/right	a	0.0	0.12	0
High WB left/thru	a	2.4	0.06	5
Washington NB left/right	b	12.6	0.14	12
Washington Street/Allen Street				
Allen EB left/thru/right	a	7.3	0.03	
Allen WB left/thru/right	a	7.4	0.03	
Washington NB left/thru/right	a	7.8	0.12	
Washington SB left/thru | thru/right	a	6.8	0.06	
Washington Street/Carlton Street				
Carlton EB left/thru/right	a	8.7	0.14	
Carlton WB left/thru/right	b	10.2	0.33	
Washington NB left/thru/right	a	9.2	0.18	
Washington SB left/thru | thru/right	a	8.2	0.13	
Ellicott Street/North Street				
North EB left/thru	b	10.0	0.24	
North WB thru/right	b	10.5	0.29	
Ellicott NB left/thru | thru/right	b	14.5	0.54	
Ellicott Street/Goodrich Street				
Goodrich EB left/thru/right	a	8.1	0.02	
Ellicott NB left/thru/right	a	8.7	0.27	
Ellicott SB left/thru/right	a	8.1	0.18	
Ellicott Street/Allen Street				
Allen EB left/thru	e	44.4	0.23	21
Ellicott NB left/thru	a	0.3	0.01	1
Ellicott SB thru/right	a	0.0	0.58	0
Ellicott Street/Carlton Street				
Carlton EB left/thru/right	b	14.7	0.33	
Carlton WB left/thru/right	c	17.4	0.47	
Ellicott NB left/thru/right	e	44.6	0.91	
Ellicott SB left/thru/right	f	385.6	1.80	
Ellicott Street/Virginia Street				
Virginia WB left/right	f	75.1	0.76	118
Ellicott NB thru/right	a	0.0	0.35	0
Ellicott SB left/thru	a	0.2	0.01	0

Scenario #1 Operations Summary: PM Peak Hour - Unsignalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Oak Street				
Ellicott NB thru/right	a	0.0	0.51	0
Ellicott SB left/thru	b	12.6	0.49	69
Oak WB left/right	b	14.4	0.12	10
Michigan Avenue/Goodrich Street				
Goodrich EB left/right	c	20.2	0.50	69
SNF Driveway WB left/thru/right	c	16.0	0.11	9
Michigan NB left/thru	a	1.4	0.04	3
Michigan SB thru/right	a	0.3	0.01	1
Michigan Avenue/Cherry Street				
Michigan NB thru I thru/right	a	0	0.16	0
Michigan SB left/thru I thru	a	7.1	0.46	61
Elm Street/Virginia Street				
Virginia EB left/thru	a	0.7	0.00	0
Virginia WB thru/right	a	0.0	0.02	0
Elm SB left/right	b	11.0	0.35	39
Elm Street/Carlton Street				
Carlton EB thru/right	a	8.0	0.18	
Carlton WB left/thru	a	8.2	0.18	
Elm NB left/right	a	7.6	0.07	
Elm Street/Goodell Street				
Goodell WB thru I thru I thru I thru	a	0.0	0.15	0
Elm NB left I left	b	11.1	0.26	25
High Street/Structure Driveway				
High EB shared left/thru	a	2.6	0.05	4
High WB shared thru/right	a	0.0	0.11	0
Driveway SB shared left/right	b	13.0	0.38	44
Ellicott Street/Structure Driveway				
Driveway EB shared left/right	f	126	1.21	734
Ellicott NB shared left/thru	a	5.7	0.19	18
Ellicott SB shared thru/right	a	0.0	0.09	0

~ approach is above capacity and queues could be longer
# volumes for queue cycle exceeds capacity
m queue is metered by upstream signal
err - accurate delay can not be calculated due to level of failure

The results of the future scenario #1 operations indicate the following approaches and intersections operating at an unacceptable LOS:

Future Scenario #1 AM Peak Hour

- Carlton Street & Ellicott Street (unsignalized)
  - Ellicott NB: LOS f (197.5)

- Structure Access & Ellicott Street (unsignalized)
  - Access EB left/right: LOS e (42.2)
- Ellicott Street & High Street: LOS D (38.5)
  - Ellicott Street NB: LOS E (59.4)
- Main Street & Goodell Street: LOS C (26.1)*
  - Main NB: LOS F (100.9)
- Elm Street & Swan Street: LOS E (66.4)*
  - Swan WB: LOS E (65.5)
  - Elm NB thru: LOS E (75.8)

Future Scenario #1 PM Peak Hour

- Carlton Street & Ellicott Street (unsignalized)
  - Ellicott NB: LOS e (44.6)
  - Ellicott SB: LOS f (385.6)
- Allen Street & Ellicott Street (unsignalized)
  - Allen EB: LOS e (44.4)
- Virginia Street & Ellicott Street (unsignalized)
  - Virginia WB: LOS f (75.1)
- Structure Access & Ellicott Street (unsignalized)
  - Access EB: LOS f (126.0)
- Tupper Street & Ellicott Street: LOS F (145.5)
  - Ellicott SB: LOS F (395.9)
- Michigan Avenue & Goodell Street: LOS D (37.5)*
  - Michigan SB: LOS F (81.7)
- Washington Street & Goodell Street: LOS D (48.7)*
  - Washington NB: LOS F (127.6)
- Oak Street & Goodell Street: LOS D (46.4)
  - Oak SB: LOS F (123.3)
- Ellicott Street & High Street: LOS F (127.6)
  - Ellicott NB: LOS F (325.9)
  - Ellicott SB: LOS F (83.7)
- Ellicott Street & Goodell Street: LOS F (198.2)
  - Ellicott NB: LOS F (Err)
  - Ellicott SB: LOS F (151.3)

* indicates a movement/intersection that operate at an unacceptable LOS based on no-build conditions prior to future scenario conditions

err – accurate delay can not be calculated due to level of failure

Due to the location of the future parking structure on Ellicott Street, the distribution of new traffic onto Ellicott Street creates significant delays on the two-lane roadway, especially at the unsignalized intersections. Since most of the signals within the study area are pretimed, the SYNCHRO analysis indicates that the existing signal timings will not be able to accommodate the significant change to the volumes in the future. Section 6 will note signal timing and phasing changes along with other mitigation measures necessary to provide acceptable operations for each scenario.

If the parking structure is built on Site I, the operation results are the same for the peak hours as Scenario #1 except that the intersection of High Street and Ellicott Street operates at an acceptable LOS (AM peak hour: LOS B with 13.5 seconds of delay for the intersection and PM peak hour: LOS B with 17.2 seconds of delay for the intersection) since the site is located just south of this intersection of Site B.

For the consideration of Site J, the unsignalized intersection at Goodrich Street and Ellicott Street is different from the rest of the scenario #1 results since the site is located just north of this intersection from Site B. In the AM peak hour, the northbound movement on Ellicott Street is a LOS F with 67.5 seconds of delay and during the PM peak hour, the southbound movement on Ellicott Street is a LOS F with 265.4 seconds of delay.

Table 14: Future Scenario #2 Operations Summary – AM Peak Hour

Scenario #2 Operations Summary: AM Peak Hour - Signalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Best Street	B	16.3		
Best EB left/thru/right	C	30.2	0.64	155
Best WB left/thru/right	C	31.4	0.66	163
Main NB left/thru | thru | thru/right	B	17.0	0.30	95
Main SB left/thru | thru | thru/right	A	4.6	0.20	57
Main Street/North Street	B	14.6		
North EB left/thru/right	C	26.0	0.66	178
North WB left/thru/right	C	21.8	0.44	117
Main NB left/thru | thru | thru/right	A	5.7	0.21	58
Main SB left/thru | thru | thru/right	B	12.4	0.35	110
Main Street/High Street	A	5.8		
High WB left/right	B	15.8	0.46	63
Main NB thru | thru | thru/right	A	6.7	0.22	65
Main SB left/thru | thru | thru	A	2.4	0.18	29
Main Street/Allen Street	B	13.0		
Allen EB left/thru/right	A	9.3	0.33	93
Allen WB left/thru/right	A	9.4	0.05	23
Main NB left/thru | thru | thru/right	B	14.3	0.15	50
Main SB left/thru | thru | thru/right	B	14.6	0.26	78
Main Street/Virginia Street	A	4.9		
Virginia EB left/thru/right	C	20.1	0.34	45
Virginia WB left/thru/right	B	16.2	0.09	18
Main NB left/thru | thru | thru/right	A	2.5	0.09	21
Main SB left/thru | thru | thru/right	A	2.1	0.09	16
Main Street/Goodell Street	C	25.9		
Goodell WB left/thru | thru | thru	A	5.8	0.50	89
Goodell WB right	A	5.6	0.24	47
Main NB left/thru	F	100.9	1.08	#405
Main SB soft right I soft right	C	28.4	0.52	138
Main SB right	A	6.5	0.22	15
Washington Street/Goodell Street	A	5.6		
Goodell WB left/thru | thru | thru | thru/right	A	1.6	0.34	13
Washington NB left/thru	B	17.0	0.51	196
Washington SB thru	B	19.8	0.21	80
Washington SB right	A	7.0	0.07	7
Washington Street/Tupper Street	B	11.5		
Tupper EB left/thru | thru | thru/right	A	0.3	0.22	0
Washington NB thru	C	20.4	0.26	93
Washington NB right	A	6.3	0.09	23
Washington SB left	C	26.5	0.28	70
Washington SB thru	C	28.1	0.43	144

Scenario #2 Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Best Street	A	7.0		
Best EB left/thru	A	8.0	0.19	43
Best WB thru/right	A	7.0	0.23	46
Ellicott NB left/thru I thru/right	A	5.6	0.07	14
Ellicott Street/High Street	B	13.3		
High EB left/thru/right	B	13.5	0.33	99
High WB left/thru/right	B	14.8	0.44	122
Ellicott NB left/thru/right	B	13.4	0.67	217
Ellicott SB left/thru/right	A	8.1	0.11	37
Ellicott Street/Goodell Street	B	16.8		
Goodell WB left/thru I thru I thru I thru/right	B	16.6	0.73	261
Ellicott NB left/thru	B	16.7	0.49	99
Ellicott SB thru/left	B	19.9	0.27	101
Ellicott Street/Tupper Street	B	12.3		
Tupper EB left/thru I thru I thru/right	A	7.0	0.31	60
Ellicott NB thru/right I right	C	24.2	0.50	192
Ellicott NB right	A	5.6	0.13	13
Ellicott SB left/thru I thru	B	18.5	0.45	43
Elm Street/Tupper Street	C	26.1		
Tupper EB thru I thru	A	2.8	0.24	25
Elm NB thru I thru/right	D	41.4	0.88	#308
Elm Street/Genesee Street	C	23.0		
Genesee EB left/thru I thru	D	36.1	0.27	88
Genesee WB thru I thru/right	C	31.8	0.19	71
Elm NB left/thru I thru I thru	C	23.0	0.68	689
Elm NB right	A	3.9	0.18	m55
Elm Street/Sycamore Street	A	6.0		
Sycamore EB left/thru	D	39.3	0.29	105
Sycamore WB thru/right	D	38.0	0.34	135
Elm NB left/thru I thru I thru/right	A	3.0	0.69	71
Elm Street/Broadway Street	A	7.0		
Broadway EB left/thru I thru	C	33.4	0.18	61
Broadway WB thru I thru/right	C	34.1	0.33	123
Elm NB left/thru I thru I thru/right	A	2.9	0.77	54
Elm Street/William Street	A	6.5		
William EB left/thru I thru	D	35.4	0.10	40
William WB thru I thru/right	D	37.5	0.35	120
Elm NB left/thru I thru I thru/right	A	2.9	0.78	32
Elm Street/Clinton Street	A	6.3		
Clinton EB left/thru	D	35.3	0.34	124
Clinton WB thru/right	D	35.7	0.42	145
Elm NB left/thru I thru I thru/right	A	2.6	0.81	26
Elm Street/North Division Street	B	12.2		
North Division WB thru I thru/right	C	33.4	0.22	83
Elm NB left/thru I thru I thru	B	11.1	0.91	256

Scenario #2 Operations Summary: AM Peak Hour - Signalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/South Division Street	C	34.6		
South Division EB left	D	46.6	0.48	165
South Division EB left/thru I thru	D	43.6	0.48	146
Elm NB thru I thru I thru/right	C	33.3	0.87	m24
Elm Street/Swan Street	E	66.4		
Swan WB thru/right	E	65.5	0.91	297
Elm NB left	A	5.5	0.50	111
Elm NB left/thru I thru I thru/right	E	75.8	1.11	#1049
Oak Street/Goodell Street	B	14.1		
Goodell WB left/thru I thru I thru I thru/right	B	13.8	0.77	347
Oak SB thru/right	C	22.4	0.22	92
Oak Street/Tupper Street	A	7.0		
Tupper EB thru I thru	A	3.4	0.23	23
Tupper EB right	A	0.6	0.16	0
Oak SB left/thru I thru	C	20.6	0.22	64
Oak Street/Genesee Street	B	11.0		
Genesee EB thru I thru/right	C	22.5	0.18	52
Genesee WB left/thru I thru	C	28.4	0.46	116
Oak SB left/thru I thru I thru	A	8.9	0.64	237
Oak SB right	A	3.1	0.34	58
Oak Street/Sycamore Street	A	9.2		
Sycamore EB thru/right	C	25.2	0.28	92
Sycamore WB left/thru	C	33.9	0.60	186
Oak SB left/thru I thru I thru/right	A	6.1	0.76	45
Oak Street/Broadway Street	B	10.7		
Broadway EB thru I thru/right	B	18.1	0.07	31
Broadway WB left/thru I thru	C	20.8	0.34	106
Oak SB left/thru I thru I thru/right	A	9.0	0.87	103
Oak Street/William Street	A	5.7		
William EB thru I thru/right	B	18.4	0.05	20
William WB left/thru I thru	C	25.5	0.38	105
Oak SB left/thru I thru I thru/right	A	2.5	0.67	20
Oak Street/Clinton Street	A	5.1		
Clinton EB thru/right	B	18.0	0.21	82
Clinton WB left/thru	B	20.0	0.27	105
Oak SB left/thru I thru I thru/right	A	3.1	0.76	13
Oak Street/North Division Street	A	5.8		
North Division WB left/thru I thru I thru	B	17.9	0.27	86
Oak SB thru I thru I thru/right	A	2.5	0.67	21
Oak Street/South Division Street	A	4.2		
South Division EB thru I thru I thru	B	17.2	0.13	45
South Division EB right	A	9.6	0.14	40
Oak SB left/thru I thru I thru I thru	A	1.7	0.42	13

Scenario #2 Operations Summary: AM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Oak Street/Swan Street	B	11.4		
Swan EB right I right	A	4.2	0.03	8
Swan WB left	B	10.2	0.12	45
Swan WB thru I thru	B	17.1	0.47	178
Oak SB thru I thru I thru I thru/right	A	8.6	0.47	74
Michigan Avenue/Best Street	B	11.7		
Best EB left/thru/right	B	14.9	0.40	117
Best WB left/thru/right	B	15.1	0.32	96
Michigan NB left/thru/right	A	7.5	0.18	53
Michigan SB left/thru/right	A	8.6	0.29	87
Michigan Avenue/North Street	C	28.1		
North EB left/thru/right	B	15.9	0.29	69
North WB left/thru/right	E	70.1	0.97	#302
Michigan NB left/thru	A	4.5	0.15	39
Michigan NB right	A	1.4	0.04	8
Michigan SB left/thru/right	A	4.9	0.28	77
Michigan Avenue/High Street	B	17.4		
High EB left/thru/right	C	32.0	0.73	#205
High WB left/thru/right	B	13.0	0.11	33
Michigan NB left/thru/right	C	21.8	0.86	#462
Michigan SB left/thru I thru/right	A	4.2	0.29	50
Michigan Avenue/Carlton Street	B	13.6		
Carlton EB left/thru/right	B	13.9	0.19	34
Carlton WB left/thru/right	B	16.9	0.18	36
Michigan NB left/thru/right	B	13.0	0.80	#484
Michigan SB left/thru/right	B	14.5	0.60	#210
Michigan Avenue/Virginia Street	F	125.6		
Virginia EB left/thru/right	B	10.3	0.10	27
Michigan NB left/thru/right	F	170.6	1.32	#854
Michigan SB left/thru/right	A	6.9	0.38	112
Michigan Avenue/Goodell Street	C	30.4		
Goodell WB left/thru I thru I thru I thru/right	C	29.0	0.98	#601
Michigan NB left	B	19.8	0.28	68
Michigan NB thru	D	37.1	0.84	#465
Michigan SB thru I thru/right	C	34.5	0.64	162
Michigan Avenue/Genesee Street	B	10.2		
Genesee EB left/thru I thru/right	B	10.7	0.27	52
Genesee WB left/thru/right	B	10.8	0.35	93
Michigan NB left/thru I thru/right	B	10.3	0.31	79
Michigan SB left/thru I thru/right	A	9.2	0.23	53

Scenario #2 Operations Summary: AM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Goodrich Street				
CMHC Driveway EB left/thru/right	b	11.7	0.02	2
Goodrich WB left/right	b	11.5	0.05	4
Main NB thru | thru | thru/right	a	0.6	0.12	2
Main SB left/thru | thru | thru	a	0.1	0.08	0
Main Street/Carlton Street				
Carlton WB left/right	b	10.6	0.09	8
Main NB thru | thru | thru/right	a	0.0	0.12	0
Main SB left/thru | thru | thru	a	2.1	0.11	9
Washington Street/High Street				
High EB thru/right	a	0.0	0.11	0
High WB left/thru	a	2.5	0.04	3
Washington NB left/right	a	9.7	0.09	7
Washington Street/Allen Street				
Allen EB left/thru/right	a	7.4	0.04	
Allen WB left/thru/right	a	7.4	0.03	
Washington NB left/thru/right	a	7.8	0.13	
Washington SB left/thru | thru/right	a	6.7	0.04	
Washington Street/Carlton Street				
Carlton EB left/thru/right	a	9.0	0.24	
Carlton WB left/thru/right	a	8.8	0.20	
Washington NB left/thru/right	a	8.9	0.17	
Washington SB left/thru | thru/right	a	7.7	0.07	
Ellicott Street/North Street				
North EB left/thru	a	8.8	0.22	
North WB thru/right	a	9.4	0.30	
Ellicott NB left/thru | thru/right	a	9.0	0.19	
Ellicott Street/Goodrich Street				
Goodrich EB left/thru/right	a	8.0	0.05	
Ellicott NB left/thru/right	a	8.6	0.26	
Ellicott SB left/thru/right	a	7.6	0.09	
Ellicott Street/Allen Street				
Allen EB left/thru	b	12.9	0.07	5
Ellicott NB left/thru	a	0.1	0.00	0
Ellicott SB thru/right	a	0.0	0.11	0
Ellicott Street/Carlton Street				
Carlton EB left/thru/right	b	11.4	0.27	
Carlton WB left/thru/right	b	10.8	0.19	
Ellicott NB left/thru/right	d	28.7	0.84	
Ellicott SB left/thru/right	b	10.9	0.29	
Ellicott Street/Virginia Street				
Virginia WB left/right	c	15.1	0.16	14
Ellicott NB thru/right	a	0.0	0.39	0
Ellicott SB left/thru	a	0.3	0.01	0

Scenario #2 Operations Summary: AM Peak Hour - Unsignalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Oak Street				
Ellicott NB thru/right	a	0.0	0.34	0
Ellicott SB left/thru	a	3.1	0.07	5
Oak WB left/right	b	14.9	0.32	35
Michigan Avenue/Goodrich Street				
Goodrich EB left/right	f	Err	13.92	Err
SNF Driveway WB left/thru/right	f	Err	16.02	Err
Michigan NB left/thru	c	17.1	0.74	178
Michigan SB thru/right	a	0.1	0.00	0
Michigan Avenue/Cherry Street				
Michigan NB thru I thru/right	a	0.0	0.24	0
Michigan SB left/thru I thru	b	4.2	0.27	28
Elm Street/Virginia Street				
Virginia EB left/thru	a	3.2	0.02	2
Virginia WB thru/right	a	0.0	0.18	0
Elm SB left/right	b	10.2	0.06	5
Elm Street/Carlton Street				
Carlton EB thru/right	a	7.9	0.19	
Carlton WB left/thru	a	7.7	0.10	
Elm NB left/right	a	7.2	0.04	
Elm Street/Goodell Street				
Goodell WB thru I thru I thru I thru	a	0.0	0.31	0
Elm NB left I left	c	22.7	0.67	126
High Street/Structure Driveway				
High EB shared left/thru	a	2.2	0.04	3
High WB shared thru/right	a	0.0	0.14	0
Driveway SB shared left/right	a	0.0	0.00	0
Ellicott Street/Structure Driveway				
Driveway EB shared left/right	a	0.0	0.00	0
Ellicott NB shared left/thru	a	2.7	0.06	5
Ellicott SB shared thru/right	a	0.0	0.04	0

Table 15: Future Scenario #2 Operations Summary – PM Peak Hour

Scenario #2 Operations Summary: PM Peak Hour - Signalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Best Street	B	17.8		
Best EB left/thru/right	C	28.1	0.56	147
Best WB left/thru/right	C	30.5	0.66	182
Main NB left/thru I thru I thru/right	B	17.4	0.33	100
Main SB left/thru I thru I thru/right	A	5.1	0.21	65
Main Street/North Street	B	14.0		
North EB left/thru/right	C	30.4	0.69	156
North WB left/thru/right	C	23.8	0.53	136
Main NB left/thru I thru I thru/right	A	5.2	0.25	63
Main SB left/thru I thru I thru/right	B	12.8	0.36	119
Main Street/High Street	B	11.4		
High WB left/right	C	24.9	0.71	167
Main NB thru I thru I thru/right	B	10.3	0.21	73
Main SB left/thru I thru I thru	A	5.5	0.33	100
Main Street/Allen Street	B	10.9		
Allen EB left/thru/right	A	9.2	0.28	73
Allen WB left/thru/right	B	12.2	0.05	24
Main NB left/thru I thru I thru/right	B	12.3	0.29	85
Main SB left/thru I thru I thru/right	A	9.5	0.24	68
Main Street/Virginia Street	A	8.6		
Virginia EB left/thru/right	B	11.5	0.26	65
Virginia WB left/thru/right	B	12.6	0.09	32
Main NB left/thru I thru I thru/right	A	7.2	0.14	31
Main SB left/thru I thru I thru/right	A	8.0	0.28	64
Main Street/Goodell Street	B	15.9		
Goodell WB left/thru I thru I thru	A	9.6	0.23	m82
Goodell WB right	A	8.5	0.11	m46
Main NB left/thru	B	16.8	0.20	66
Main SB soft right I soft right/right	C	29.0	0.60	153
Washington Street/Goodell Street	D	48.6		
Goodell WB left/thru I thru I thru I thru/right	A	3.9	0.16	m24
Washington NB left/thru	F	127.6	1.17	#477
Washington SB thru	C	26.5	0.48	181
Washington SB right	A	8.4	0.05	7
Washington Street/Tupper Street	B	12.1		
Tupper EB left/thru I thru I thru/right	A	0.5	0.46	0
Washington NB thru	C	23.4	0.31	112
Washington NB right	A	9.7	0.17	43
Washington SB left	D	47.8	0.62	151
Washington SB thru	D	39.4	0.46	175

Scenario #2 Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Best Street	A	7.7		
Best EB left/thru	A	9.7	0.38	84
Best WB thru/right	A	6.6	0.19	38
Ellicott NB left/thru I thru/right	A	5.4	0.13	20
Ellicott Street/High Street	B	18.7		
High EB left/thru/right	B	11.2	0.33	97
High WB left/thru/right	C	31.3	0.86	#336
Ellicott NB left/thru/right	A	9.9	0.44	110
Ellicott SB left/thru/right	B	11.6	0.31	99
Ellicott Street/Goodell Street	B	14.5		
Goodell WB left/thru I thru I thru I thru/right	A	2.8	0.27	20
Ellicott NB left/thru	D	41.8	0.84	#224
Ellicott SB thru/left	C	30.2	0.63	252
Ellicott Street/Tupper Street	C	28.9		
Tupper EB left/thru I thru I thru/right	A	5.1	0.48	59
Ellicott NB thru/right I right	C	23.6	0.45	165
Ellicott NB right	C	21.3	0.44	94
Ellicott SB left/thru I thru	F	92.0	1.07	108
Elm Street/Tupper Street	A	8.3		
Tupper EB thru I thru	A	5.6	0.68	m115
Elm NB thru I thru/right	C	20.9	0.37	70
Elm Street/Genesee Street	A	9.1		
Genesee EB left/thru I thru	A	7.9	0.30	m17
Genesee WB thru I thru/right	C	21.0	0.16	54
Elm NB left/thru I thru I thru	A	8.6	0.68	391
Elm NB right	A	0.1	0.06	m0
Elm Street/Sycamore Street	A	9.7		
Sycamore EB left/thru	D	39.4	0.49	m163
Sycamore WB thru/right	C	20.9	0.16	60
Elm NB left/thru I thru I thru/right	A	6.0	0.51	130
Elm Street/Broadway Street	A	5.5		
Broadway EB left/thru I thru	A	8.0	0.34	m26
Broadway WB thru I thru/right	B	14.8	0.10	36
Elm NB left/thru I thru I thru/right	A	4.3	0.55	52
Elm Street/William Street	A	8.0		
William EB left/thru I thru	C	28.0	0.39	m77
William WB thru I thru/right	C	22.1	0.17	44
Elm NB left/thru I thru I thru/right	A	3.9	0.45	39
Elm Street/Clinton Street	B	13.9		
Clinton EB left/thru	D	45.4	0.78	232
Clinton WB thru/right	B	13.1	0.14	39
Elm NB left/thru I thru I thru/right	A	5.5	0.48	26

Scenario #2 Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Elm Street/North Division Street	B	12.7		
North Division WB thru I thru/right	B	14.6	0.16	45
Elm NB left/thru I thru I thru	B	12.5	0.49	127
Elm Street/South Division Street	A	6.4		
South Division EB left	B	11.4	0.50	225
South Division EB left/thru I thru	A	8.1	0.42	156
Elm NB thru I thru I thru/right	A	3.9	0.31	35
Elm Street/Swan Street	B	15.7		
Swan WB thru/right	C	34.6	0.76	230
Elm NB left	A	1.7	0.11	12
Elm NB left/thru I thru I thru/right	A	7.9	0.31	89
Oak Street/Goodell Street	C	24.0		
Goodell WB left/thru I thru I thru I thru/right	A	7.9	0.34	104
Oak SB thru/right	E	62.0	0.97	m#503
Oak Street/Tupper Street	C	22.2		
Tupper EB thru I thru	B	14.2	0.76	m501
Tupper EB right	A	4.3	0.26	m34
Oak SB left/thru I thru	D	44.6	0.96	m#276
Oak Street/Genesee Street	B	18.9		
Genesee EB thru I thru/right	C	24.9	0.45	148
Genesee WB left/thru I thru	B	15.3	0.26	m42
Oak SB left/thru I thru I thru	B	19.0	0.72	m385
Oak SB right	A	4.3	0.15	m35
Oak Street/Sycamore Street	A	8.1		
Sycamore EB thru/right	C	28.3	0.55	206
Sycamore WB left/thru	C	23.6	0.38	112
Oak SB left/thru I thru I thru/right	A	4.4	0.72	35
Oak Street/Broadway Street	A	8.7		
Broadway EB thru I thru/right	C	22.4	0.25	88
Broadway WB left/thru I thru	B	19.3	0.28	57
Oak SB left/thru I thru I thru/right	A	6.1	0.79	53
Oak Street/William Street	A	4.4		
William EB thru I thru/right	C	22.5	0.13	42
William WB left/thru I thru	C	21.3	0.29	55
Oak SB left/thru I thru I thru/right	A	2.0	0.71	23
Oak Street/Clinton Street	B	11.6		
Clinton EB thru/right	D	35.9	0.76	#350
Clinton WB left/thru	C	22.7	0.17	69
Oak SB left/thru I thru I thru/right	A	6.8	0.82	34
Oak Street/North Division Street	A	7.9		
North Division WB left/thru I thru I thru	B	16.6	0.09	33
Oak SB thru I thru I thru/right	A	7.3	0.85	52

Scenario #2 Operations Summary: PM Peak Hour - Signalized Intersections, continued				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Oak Street/South Division Street	B	11.2		
South Division EB thru I thru I thru	C	23.7	0.42	138
South Division EB right	D	45.9	0.86	#386
Oak SB left/thru I thru I thru I thru	A	1.7	0.66	12
Oak Street/Swan Street	B	10.6		
Swan EB right I right	C	32.3	0.64	182
Swan WB left	D	36.2	0.47	m130
Swan WB thru I thru	C	32.7	0.20	m57
Oak SB thru I thru I thru I thru/right	A	3.6	0.69	79
Michigan Avenue/Best Street	B	12.3		
Best EB left/thru/right	B	16.8	0.46	143
Best WB left/thru/right	B	13.7	0.26	77
Michigan NB left/thru/right	A	7.4	0.20	61
Michigan SB left/thru/right	A	7.1	0.13	39
Michigan Avenue/North Street	B	13.5		
North EB left/thru/right	C	25.4	0.53	112
North WB left/thru/right	D	36.0	0.64	114
Michigan NB left/thru	A	3.9	0.17	52
Michigan NB right	A	1.1	0.09	13
Michigan SB left/thru/right	A	3.7	0.19	56
Michigan Avenue/High Street	A	9.4		
High EB left/thru/right	C	23.4	0.58	134
High WB left/thru/right	B	14.3	0.07	25
Michigan NB left/thru/right	A	8.5	0.48	128
Michigan SB left/thru I thru/right	A	6.9	0.62	143
Michigan Avenue/Carlton Street	F	86.5		
Carlton EB left/thru/right	B	12.8	0.36	50
Carlton WB left/thru/right	B	16.8	0.18	35
Michigan NB left/thru/right	A	4.1	0.38	91
Michigan SB left/thru/right	F	139.2	1.24	#634
Michigan Avenue/Virginia Street	B	11.8		
Virginia EB left/thru/right	A	6.9	0.27	43
Michigan NB left/thru/right	A	8.8	0.52	162
Michigan SB left/thru/right	B	14.5	0.77	347
Michigan Avenue/Goodell Street	F	173.5		
Goodell WB left/thru I thru I thru I thru/right	A	8.3	0.29	80
Michigan NB left	B	18.0	0.13	36
Michigan NB thru	C	21.1	0.37	158
Michigan SB thru I thru/right	F	347.6	1.70	#639
Michigan Avenue/Genesee Street	A	9.3		
Genesee EB left/thru I thru/right	A	9.3	0.15	36
Genesee WB left/thru/right	A	9.3	0.19	55
Michigan NB left/thru I thru/right	A	9.5	0.26	65
Michigan SB left/thru I thru/right	A	9.0	0.24	52

Scenario #2 Operations Summary: PM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Main Street/Goodrich Street				
CMHC Driveway EB left/thru/right	b	14.3	0.13	11
Goodrich WB left/right	b	13.4	0.13	11
Main NB thru | thru | thru/right	a	0.2	0.18	1
Main SB left/thru | thru | thru	a	0.4	0.15	1
Main Street/Carlton Street				
Carlton WB left/right	b	12.6	0.32	35
Main NB thru | thru | thru/right	a	0.0	0.08	0
Main SB left/thru | thru | thru	a	1.4	0.18	5
Washington Street/High Street				
High EB thru/right	a	0.0	0.12	0
High WB left/thru	a	2.2	0.06	5
Washington NB left/right	b	12.9	0.15	13
Washington Street/Allen Street				
Allen EB left/thru/right	a	7.3	0.03	
Allen WB left/thru/right	a	7.4	0.03	
Washington NB left/thru/right	a	7.8	0.12	
Washington SB left/thru | thru/right	a	6.8	0.06	
Washington Street/Carlton Street				
Carlton EB left/thru/right	a	8.7	0.14	
Carlton WB left/thru/right	b	10.2	0.33	
Washington NB left/thru/right	a	9.2	0.18	
Washington SB left/thru | thru/right	a	8.2	0.13	
Ellicott Street/North Street				
North EB left/thru	a	9.7	0.23	
North WB thru/right	a	9.8	0.25	
Ellicott NB left/thru | thru/right	b	12.3	0.50	
Ellicott Street/Goodrich Street				
Goodrich EB left/thru/right	a	7.8	0.02	
Ellicott NB left/thru/right	a	8.1	0.19	
Ellicott SB left/thru/right	a	7.7	0.13	
Ellicott Street/Allen Street				
Allen EB left/thru	b	14.3	0.07	5
Ellicott NB left/thru	a	0.2	0.01	0
Ellicott SB thru/right	a	0.0	0.30	0
Ellicott Street/Carlton Street				
Carlton EB left/thru/right	b	12.8	0.29	
Carlton WB left/thru/right	b	14.8	0.42	
Ellicott NB left/thru/right	c	17.2	0.57	
Ellicott SB left/thru/right	d	32.9	0.85	
Ellicott Street/Virginia Street				
Virginia WB left/right	c	20.5	0.35	38
Ellicott NB thru/right	a	0.0	0.26	0
Ellicott SB left/thru	a	0.1	0.00	0

Scenario #2 Operations Summary: PM Peak Hour - Unsignalized Intersections				
Intersection	**LOS**	**Delay (Seconds)**	**v/c Ratio**	**95th Percentile Queue (feet)**
Ellicott Street/Oak Street				
Ellicott NB thru/right	a	0.0	0.41	0
Ellicott SB left/thru	a	6.7	0.29	30
Oak WB left/right	b	12.4	0.09	8
Michigan Avenue/Goodrich Street				
Goodrich EB left/right	f	Err	3.50	Err
SNF Driveway WB left/thru/right	f	Err	Err	Err
Michigan NB left/thru	a	7.0	0.30	32
Michigan SB thru/right	a	0.1	0.00	0
Michigan Avenue/Cherry Street				
Michigan NB thru I thru/right	a	0	0.16	0
Michigan SB left/thru I thru	c	12.8	0.77	202
Elm Street/Virginia Street				
Virginia EB left/thru	a	0.7	0.00	0
Virginia WB thru/right	a	0.0	0.02	0
Elm SB left/right	b	11.0	0.35	39
Elm Street/Carlton Street				
Carlton EB thru/right	a	8.0	0.18	
Carlton WB left/thru	a	8.2	0.18	
Elm NB left/right	a	7.6	0.07	
Elm Street/Goodell Street				
Goodell WB thru I thru I thru I thru	a	0.0	0.14	0
Elm NB left I left	b	11.9	0.28	29
High Street/Structure Driveway				
High EB shared left/thru	a	0.9	0.02	1
High WB shared thru/right	a	0.0	0.19	0
Driveway SB shared left/right	b	10.3	0.07	6
Ellicott Street/Structure Driveway				
Driveway EB shared left/right	a	9.6	0.12	11
Ellicott NB shared left/thru	a	1.3	0.02	2
Ellicott SB shared thru/right	a	0.0	0.07	0

~ approach is above capacity and queues could be longer
# volumes for queue cycle exceeds capacity
m queue is metered by upstream signal
err - accurate delay can not be calculated due to level of failure

The results of the future scenario #2 operations indicate the following approaches and intersections operating at an unacceptable LOS:

Scenario #2 AM

- Goodrich (structure access & SNF access) & Michigan Avenue (unsignalized)
  - Goodrich EB: LOS f (err)
  - SNF Access WB: LOS f (err)
- Elm Street & Goodell Street (unsignalized)
  - Elm NB: LOS e (39.5)
- Virginia Street & Michigan Avenue: LOS F (125.6)
  - Michigan NB: LOS F (170.6)
- North Street & Michigan Avenue: LOS C (28.1)
  - North WB: LOS E (70.1)
- Elm Street & Swan Street: LOS E (66.4)*
  - Swan WB: LOS E (65.5)
  - Elm NB thru: LOS E (75.8)
- Main Street & Goodell Street: LOS C (25.9)*
  - Main NB: LOS F (100.9)

Scenario #2 PM

- Goodrich (structure access & SNF access) & Michigan Avenue (unsignalized)
  - Goodrich EB: LOS f (err)
  - SNF Access WB: LOS f (err)
- Washington Street & Goodell Street: LOS D (48.6)*
  - Washington NB: LOS F (127.6)
- Oak Street & Goodell Street: LOS C (24.0)
  - Oak SB: LOS E (62.0)
- Ellicott Street & Tupper Street: LOS C (28.9)
  - Ellicott SB: LOS F (92.0)
- Michigan Avenue & Goodell Street: LOS F (173.5)*
  - Michigan SB: LOS F (347.6)
- Michigan Avenue & Carlton Street: LOS F (86.5)
  - Michigan SB: LOS F (139.2)

* indicates a movement/intersection that operates at an unacceptable LOS based on no-build conditions prior to future scenario conditions

err – accurate delay can not be calculated due to level of failure

Since most of the signals within the study area are pretimed, the SYNCHRO analysis indicates that the existing signal timings will not be able to accommodate significant changes to the volumes in the future. Section 6 will note signal timing and phasing changes along with other mitigation measures necessary to provide acceptable operations for each scenario.

The SYNCHRO reports for the two build scenarios are included in Appendix D.

iv) Parking Supply and Demand

The BNMC is currently in the planning stages for a new 1,600 space parking facility at the north end of campus. Five sites have been identified as potential locations for this facility and are analyzed in the TIS:

- *Site B - Parcel on Ellicott Street between High Street & Goodrich Street* (same parcel proposed for the MOB): existing surface parking lots (312 spaces)
- *Site F - Parcel on Michigan Avenue between High Street & Goodrich Street*: existing surface parking lots (205 spaces)
- *Site G - Parcel on Michigan Avenue between North Street & Goodrich Street*: existing surface parking lots (474 spaces)
- *Site I – Parcel on Ellicott Street between Carlton Street & High Street:* existing surface parking lot (207 spaces)
- *Site J – Parcel on Ellicott Street between Goodrich Street & North Street:* expansion of existing city owned 880 space parking garage

Sites B, I, and J are located within close proximity of each other along Ellicott Street. Therefore the overall trip distribution was based on Site B and is referred to as Future Scenario #1. Sites F and G are located adjacent to each other at the intersection of Michigan Avenue and Goodrich Street. The same site trip distribution was used for both these sites and is referred to as Future Scenario #2.

While the MOB, SNF and CMHC are expected to include on-site parking spaces, the GVI, MOB, SNF and the proposed parking structure are proposed to be constructed on existing surface parking lots. These losses, including the loss of 20 spaces on-street spaces along Goodrich Street, will negatively affect the parking supply available in the study area. Although future Scenario #1 (Site B) assumes the parking structure will be built on the proposed MOB site, it is assumed the MOB and its associated parking will be built at another nearby location. Table 16 shows the changes in parking supply, both positive and negative, for the scenarios associated with the five different possible locations of the new parking structure.

Table 16: Changes in Future Parking Supply

Location	Replaced By	Change in Supply
	All Scenarios	
Goodrich Street	Street closure	-20
KH-5	Global Vascular Institute (GVI)	-60
KH-2/KH-2A*	Medical Office Building (MOB) or Parking Facility Site B	-103
BMG-2	Skilled Nursing Facility (SNF)	-107
Medical Office Building (MOB)		200
Skilled Nursing Facility (SNF)		75
Community Mental Health Center (CMHC)		33
Proposed Parking Facility		1,600
	Subtotal	*1,618*
	Scenario #1 Site B Total	***1,618***
	Scenario #1 Site I	
BMG-1	Proposed Parking Facility	-207
	Scenario #1 Site I Total	***1,411***
	Scenario #1 Site J	
COB-1	Expansion of Existing Garage	0
	Scenario #1 Site J Total	***1,618***
	Scenario #2 Site F	
KH-4/KH-4A	Proposed Parking Facility	-205
	Scenario #2 Site F Total	***1,413***
	Scenario #2 Site G	
KH-6A/KH-6B	Proposed Parking Facility	-474
	Scenario #2 Site G Total	***1,144***

* - assumes 2/3 of the existing parking will be maintained.

Walker documented future parking demand in their report, *Draft Report: Future Conditions Report Immediate Solutions (2009-2014).* The Walker report calibrated the existing parking demand analysis to reflect the 95% busiest day at the hospital and anticipated demand from projected increases in hospital beds and associated increases in employees, physicians and staff. The adjusted demand analysis indicates that although some individual lots will experience an increased demand, the overall parking system will still have a surplus of approximately 350 spaces. Therefore, the future parking supply and demand analysis presented here focuses on the increased parking demand and change in supply associated with proposed projects in the North End Development.

Walker developed a parking demand model that is documented in their report. This model provides demand ratios for the different types of proposed uses as

presented in Table 17. Consistent with the Walker study and the trip generation analysis, the estimated demand was reduced by 23% to account for trips by other modes including transit and carpooling.

Table 17: Future Parking Demand

PROPOSED PROJECT		LAND USE	SIZE (SF/beds)	DEMAND RATIO (VEHICLES/1000 SF)	DEMAND (VEHICLES)
GVI	GVI	Clinical Care	250,500	3.50	877
	JI/UB/Incubator	Research	160,000	1.60	256
	UB Clinical Research	Outpatient	15,000	4.00	60
	UB Incubator	Office	40,000	2.00	80
	BGH	Clinical Care	50	3.50	175
	To be removed from BGH				
	ED	Clinical Care	10,400	3.50	-36
	Cardiac Angio	Clinical Care	17,000	3.50	-60
Medical Office Bldg		Outpatient	220,000	4.00	880
		Lab	40,000	0.75	30
		Retail	40,000	2.65	27
Kaleida Skilled Nursing Facility		Nursing Home	200,000	1.05	210
CMHC *		Outpatient	16,800	4.00	67
* Difference between existing (19,832 SF) and proposed (36,586 SF)					
				PARKING DEMAND SUBTOTAL	2,566
				MODE SHARE REDUCTION (23%)	590
				INCREASE IN PARKING DEMAND	1,975

Table 18 provides a comparison of the increase in demand to the change in supply. A proposed parking facility on Sites B and J will meet the future demand of the North End Development. Parking facilities on Sites I and F would result in a small deficit of approximately 200 vehicles. User reallocation of resources, coupled with transportation demand management measures can mitigate this deficit. If Site G, with an anticipated deficit of approximately 480 spaces is selected as the preferred site, there will be a need to construct additional parking capacity.

Table 18: Future Supply/Demand Comparison

	SCENARIO #1 (SITE B)	SCENARIO #1 (SITE I)	SCENARIO #1 (SITE J)	SCENARIO #2 (SITE F)	SCENARIO #2 (SITE G)
INC. IN DEMAND	1,975	1,975	1,975	1,975	1,975
CHANGE IN SUPPLY	1,618	1,411	1,618	1,413	1,144
EXISTING SURPLUS	350	350	350	350	350
NET SUPPLY	1,968	1,761	1,968	1,763	1,494
SURPLUS/(DEFICIT)	**(7)***	**(214)**	**(7)**	**(212)**	**(481)**

* - The net parking gain for this scenario will most likely be lower than shown. This scenario assumes the replacement of the MOB elsewhere which will most likely result in an additional loss of surface parking.

This parking analysis documents that the parking demand associated with the North End Development can be accommodated within the project study area. The selection of the preferred parking location will take into account the parking supply and demand relationship, traffic operations including facility access/egress, site availability and construction feasibility. When the preferred parking location is selected, there will be a detailed analysis of the proposed access/egress locations.

v) Public Transportation

Due to recent rising fuel costs and other economic factors, the NFTA is reported a record number of bus and rail riders. According to an article by James Fink in Business First of Buffalo, dated September 18th, 2008 (http://buffalo.bizjournals.com/buffalo/stories/2008/09/15/daily44.html), public transportation system ridership is up 12 percent from one year ago. Increased ridership has reduced capacity on some routes. To address these capacity issues, the NFTA is conducting an internal system-side study to determine if a different allocation of buses and routes might be needed. It is anticipated that the NFTA will continue to modify their system to address changes in demand. Future transit use will also be enhanced by the proposed extension of Allen Street, providing improved access to the Allen-Hospital Station.

6) Transportation Mitigation Recommendations

As noted in the description of Build Scenarios, the proposed North End Development will result in increased vehicle trips contributing to a drop in LOS at several study area intersections. To mitigate the effect of the North End Development, the following mitigation measures are recommended:

Future Scenario # 1 AM Peak Hour

- Carlton Street & Ellicott Street (unsignalized)
  - Ellicott NB: LOS f (197.5)
  - Signalize the intersection using a pretimed signal of cycle length 60 sec
  - Mitigated Operations - Ellicott NB: LOS B (18.0) and overall intersection: LOS B (15.2)
- Ellicott Street & High Street: LOS D (38.5)
  - Ellicott Street NB: LOS E (59.4)
  - Add 6 sec to the Ellicott NB/SB movement by taking it out from the EB/WB movements
  - Mitigated Operations - Ellicott NB: LOS C (20.5) and overall intersection: LOS B (18.5)
- Main Street & Goodell Street: LOS C (26.1)*
  - Main NB: LOS F (100.9)
  - Add 10 sec to Main NB/SB movements by taking it out from the WB movement on Goodell
  - Mitigated Operations - Main NB: LOS C (32.7) and overall intersection: LOS B (17.4)
- Elm Street & Swan Street: LOS E (66.4)*
  - Swan WB: LOS E (65.5)
  - Elm NB thru: LOS E (75.8)
  - The WB movement at this intersection operates at LOS E (65.5) and the NB movement operates at LOS D (42.9) in the No-Build conditions. The NB through volume in the No-Build AM peak hour is 2815 vehicles. In the future scenario, the NB through volume increases by 170 project trips to 2985 vehicles. Because of this 6% increase in NB through volume, the NB movement degrades to LOS E (66.4). No mitigation measures are identified currently.

Future Scenario #1 PM Peak Hour

- Carlton Street & Ellicott Street (unsignalized)
  - Ellicott NB: LOS e (44.6)
  - Ellicott SB: LOS f (385.6)
  - Signalize the intersection using a pretimed signal of cycle length 60 sec.
  - Mitigated Operations - Ellicott NB: LOS A (8.4), Ellicott SB: LOS C (20.1) and overall intersection LOS B (16.6)

- Allen Street & Ellicott Street (unsignalized)
  - Allen EB: LOS e (44.4)
  - No recommended improvements
- Virginia Street & Ellicott Street (unsignalized)
  - Virginia WB: LOS f (75.1)
  - No recommended improvements
- Tupper Street & Ellicott Street: LOS F (145.5)
  - Ellicott SB: LOS F (395.9)
  - It is recommended that dual lefts be provided for the SB left turn from Ellicott on to Tupper. This is consistent with the recommendation in the Master Plan. A protected SB left turn phase is provided and the signal timings are optimized.
  - Mitigated Operations - Ellicott SB: LOS C (30.0) and overall intersection LOS D (38.1)
- Michigan Avenue & Goodell Street: LOS D (37.5)*
  - Michigan SB: LOS F (81.7)
  - Add 10 sec to Michigan SB movement by taking 5 sec from the WB movement on Goodell and by taking out 5 more sec from the Michigan NB left-turn movement
  - Mitigated Operations - Michigan SB: LOS C (27.7) and overall intersection: LOS B (18.7)
- Washington Street & Goodell Street: LOS D (48.7)*
  - Washington NB: LOS F (127.6)
  - Add 10 sec to Washington NB/SB movements by taking it out from the WB movement on Goodell
  - Mitigated Operations - Washington NB: LOS C (20.1) and overall intersection: LOS B (12.5 s)
- Oak Street & Goodell Street: LOS D (46.4)
  - Oak SB: LOS F (123.3)
  - Add 10 sec to Oak SB movement by taking it out from the WB movement on Goodell
  - Mitigated Operations - Oak SB: LOS C (32.4) and overall intersection: LOS B (20.0). The bandwidth for the WB movement on Goodell St is not significantly affected.
- Ellicott Street & High Street: LOS F (127.6)
  - Ellicott NB: LOS F (325.9)
  - Ellicott SB: LOS F (83.7)
  - It is recommended that two SB travel lanes be provided on Ellicott just north and south of High. Parking on the west side of Ellicott north and south of High needs to be eliminated.
  - Add 5 sec from EB/WB movements on High to the NB/SB movements on Ellicott
  - Mitigated Operations - Ellicott NB: LOS B (12.0), Ellicott SB: LOS C (32.3) and overall intersection: LOS C (22.5)

- Ellicott Street & Goodell Street: LOS F (198.2)
  - Ellicott NB: LOS F (Err)
  - Ellicott SB: LOS F (151.3)
  - Add 15 sec to Ellicott NB/SB movements by taking it out from the WB movement on Goodell
  - Mitigated Operations – Ellicott SB: LOS C (26.2), Ellicott NB: LOS D (37.6) and overall intersection: LOS B (16.3)
- Ellicott Street & Oak Street
  - Provide a SB left-turn lane on Ellicott at Oak, which will require loss of on-street parking north of Oak, to remove high left-turn volume from through travel lane

* indicates a movement/intersection that operates at an unacceptable LOS based on no-build conditions prior to future scenario conditions
err – accurate delay can not be calculated due to level of failure

There are no additional mitigation measures needed due to the consideration of Site I for the proposed parking structure and the mitigation measure noted for the intersection of High Street and Ellicott Street in scenario #1 would not be necessary.

In order to mitigate the significant delays on Ellicott Street at its intersection with Goodrich Street due to the construction of the proposed parking structure on Site J, it is recommended that the stop signs be removed on the Ellicott Street approaches. During the AM peak, the northbound Ellicott Street movement improves to a LOS C with 20.7 seconds of delay compared to the LOS F with 67.5 seconds of delay without mitigation. During the PM peak, the southbound Ellicott Street movement improves to a LOS D with 36.6 seconds of delay compared to the LOS F with 265.4 seconds of delay without mitigation.

Future Scenario #2 AM Peak Hour

- Virginia Street & Michigan Avenue: LOS F (125.6)
  - Michigan NB: LOS F (170.6)
  - Double the existing cycle length of 60 sec to 120 sec and provide 100 sec for NB/SB movements
  - Mitigated Operations - Michigan NB: LOS D (52.9) and overall intersection: LOS D (40.0)
- North Street & Michigan Avenue: LOS C (28.1)
  - North WB: LOS E (70.1)
  - Add 2 sec to the EB/WB movement by taking it out from the NB/SB movement on Michigan Ave.
  - Mitigated Operations - North WB: LOS D (49.0) and overall intersection: LOS C (21.2)

- Elm Street & Swan Street: LOS E (66.4)*
  - Swan WB: LOS E (65.5)
  - Elm NB thru: LOS E (75.8)
  - The WB movement at this intersection operates at LOS E (65.5) and the NB movement operates at LOS D (42.9) in the No-Build conditions. The NB through volume in the No-Build AM peak hour is 2815 vph. In the future scenario, the NB through volume increases by around 170 project trips to 2985 vph. Because of this 6% increase in NB through volume, the NB movement degrades to LOS E (66.4). No mitigation measures are identified currently.
- Main Street & Goodell Street: LOS C (25.9)*
  - Main NB: LOS F (100.9)
  - Add 10 sec to NB/SB movements on Main by taking it out from the WB Goodell movement
  - Mitigated Operations - Main NB: LOS C (32.7) and overall intersection: LOS B (16.5)

Future Scenario #2 PM Peak Hour

- Washington Street & Goodell Street: LOS D (48.6)*
  - Washington NB: LOS F (127.6)
  - Add 10 sec to NB/SB movements on Washington by taking it out from Goodell WB
  - Mitigation Operations - Washington NB: LOS C (20.1) and overall intersection: LOS B (13.7)
- Oak Street & Goodell Street: LOS C (24.0)
  - Oak SB: LOS E (62.0)
  - Add 10 sec to SB movement on Oak by taking it out from the WB Goodell movement
  - Mitigation Operations - Oak SB: LOS C (25.3) and overall intersection: LOS B (16.6)
- Ellicott Street & Tupper Street: LOS C (28.9)
  - Ellicott SB: LOS F (92.0)
  - Add 10 sec to NB/SB movements on Ellicott by taking it out from the EB Tupper movement
  - Mitigated Operations - Ellicott SB: LOS C (32.2) and overall intersection: LOS B (16.9)
- Michigan Avenue & Goodell Street: LOS F (173.5)*
  - Michigan SB: LOS F (347.6)
  - Add 16 sec to the SB Michigan movement by taking out 9 sec from the WB Goodell movement and taking out 7 sec from the NB Michigan left-turn movement
  - Mitigated Operations - Michigan SB: LOS C (33.8) and overall intersection: LOS C (23.4)

- Michigan Avenue & Carlton Street: LOS F (86.5)
  - Michigan SB: LOS F (139.2)
  - Add 9 sec to the SB Michigan movement by taking out 3 sec from the EB/WB Carlton movements and taking out 6 sec from the NB left-turn movement
  - Mitigated Operations – Michigan SB: LOS C (27.5) and overall intersection: LOS B (19.4)
- Michigan Avenue & Cherry Street:
  - Restripe and sign the SB Michigan approach to consist of a dedicated left-turn lane and exclusive through lane. The high left-turn volumes will make this lane a defacto left-turn lane.

Mitigation Summary

Under future scenario #1, the following mitigation measures are recommended and are consistent with the recommendations in the Master Plan:

- Add southbound through lane on Ellicott Street just north and south of High Street which will require the loss of on-street parking south of High Street and a drop-off area north of High Street
- Add southbound left-turn lane on Ellicott Street at the intersection with Oak Street which will require the loss of on-street parking north of Oak Street
- Provide dual left-turn lanes for southbound traffic on Ellicott Street at Tupper Street
- Installation of a signal at Ellicott Street and Carlton Street
- Optimization of signal splits and/or cycle lengths at the following intersections:
  - Tupper Street & Ellicott Street
  - High Street & Ellicott Street
  - Ellicott Street & Goodell Street
  - Goodell Street & Oak Street (the recommended changes does not significantly affect signal coordination on Oak Street)
- When the preferred parking location is selected, there will be a detailed analysis of the proposed ingess/egress locations. Depending on the number and locations of driveways, primary driveways may require signalization.

The poor operations at the intersection of Elm Street and Swan Street cannot be mitigated. The long delays at this intersection were noted in the no-build conditions analysis for the AM peak hour without the addition of the North End Development traffic. The anticipated project trips added to this intersection are a small share of the overall volumes, approximately 6%.

If the proposed parking structure is constructed on Site I, no additional mitigation measures are necessary and the mitigation noted at the intersection of High Street and Ellicott Street would not be necessary.

If the proposed parking structure is constructed on Site J, it is recommended that in addition to the mitigation measures noted for scenario #1, the stop signs be removed for the Ellicott Street approaches to Goodrich Street.

Under future scenario #2, the following mitigation measures are recommended:

- Restripe and sign the SB Michigan approach to consist of a dedicated left-turn lane onto Cherry Street and exclusive through lane
- Optimization of signal splits and/or cycle lengths at the following intersections:
  - Virginia Street & Michigan Avenue
  - North Street & Michigan Avenue
  - Main Street & Goodell Street
  - Washington Street & Goodell Street
  - Goodell Street & Oak Street (the recommended changes does not significantly affect signal coordination on Oak Street)
  - Tupper Street & Ellicott Street
  - Michigan Avenue & Goodell Street
  - Michigan Avenue & Carlton Street
- When the preferred parking location is selected, there will be a detailed analysis of the proposed ingess/egress locations. Depending on the number and locations of driveways, primary driveways may require signalization.

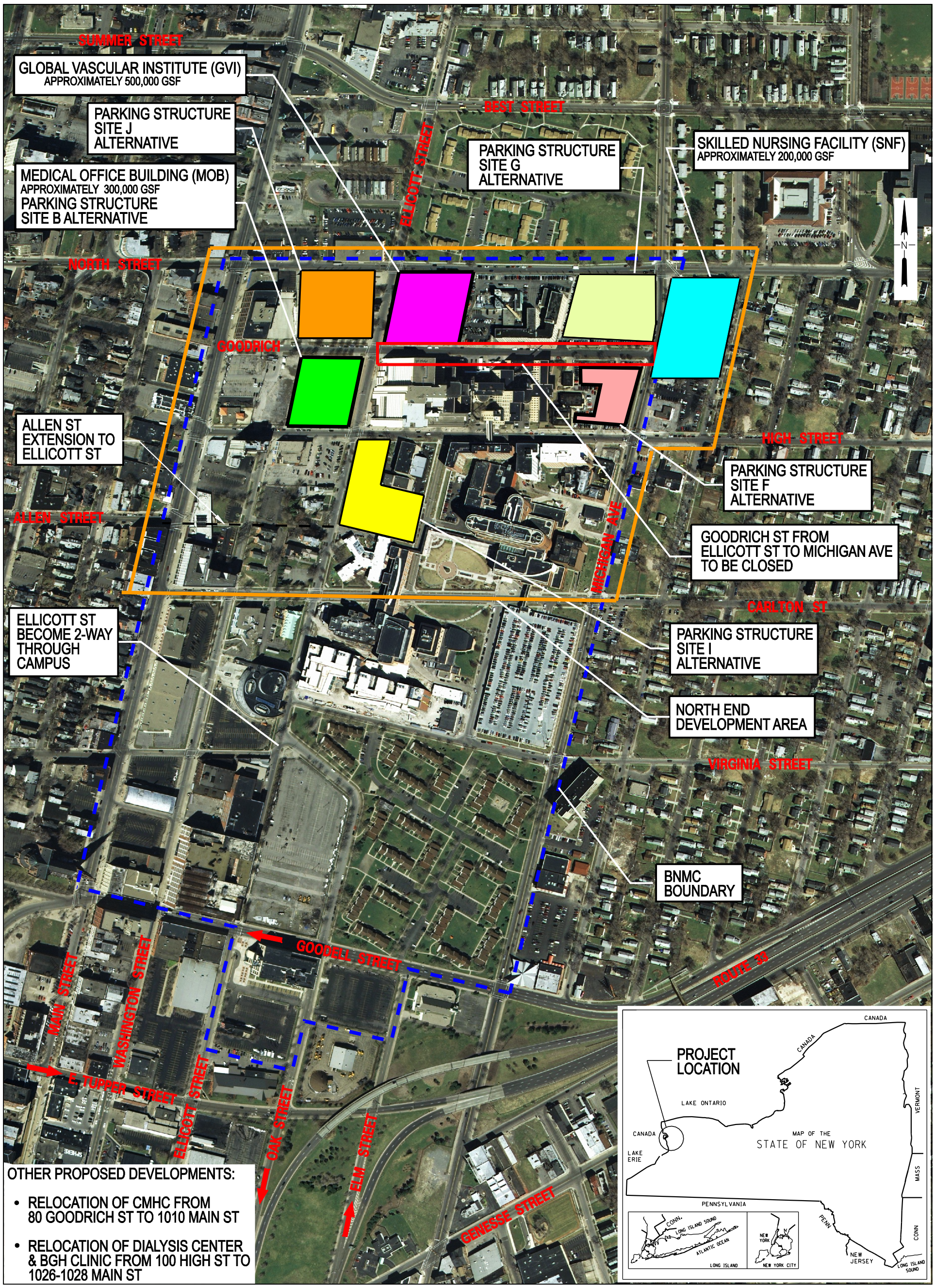
With these improvements, the study area intersections will operate at acceptable LOS except at the intersection of Elm Street and Swan Street, providing improved access and egress to the North End Development and the BNMC campus as a whole.

In addition to these physical improvements, its is recommended that the campus continue to pursue balancing growth and sustainability, the goal of the Comprehensive Transportation, Traffic, and Parking Plan is being developed for the BNMC. As part of this plan, it is recommended that the BNMC develop a comprehensive Transportation Demand Management (TDM) Program. TDM is a collection of strategies to reduce vehicle trips and encourage alternative modes. Strategies should include:

- Financial incentives,
- Transit programs,
- Carpool programs,
- Car or bike sharing programs,
- Back-up programs (guaranteed ride home or occasional parking permits), and
- Education and promotion.

Appendix A

Report Figures



OTHER PROPOSED DEVELOPMENTS:

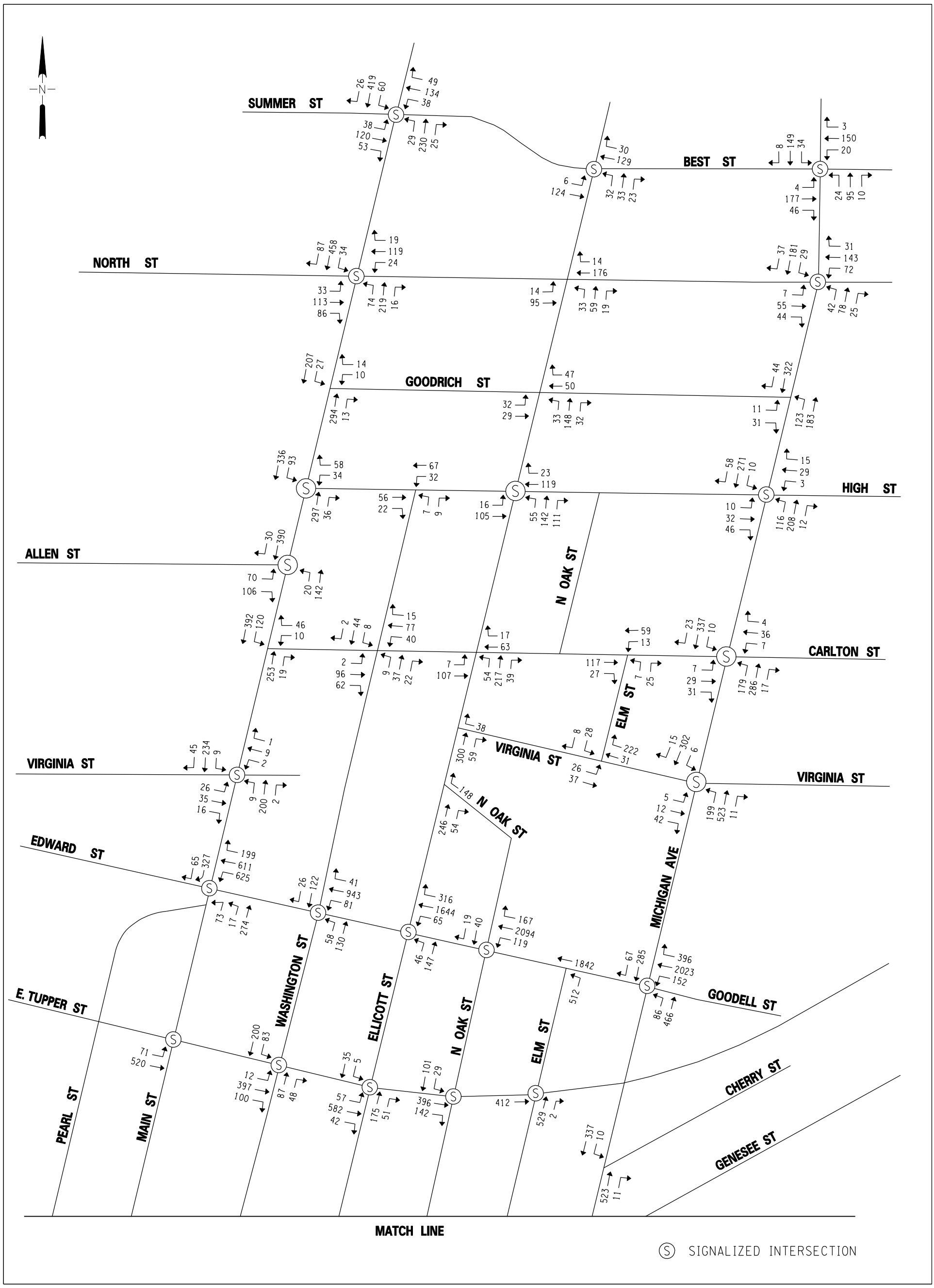
- RELOCATION OF CMHC FROM 80 GOODRICH ST TO 1010 MAIN ST
- RELOCATION OF DIALYSIS CENTER & BGH CLINIC FROM 100 HIGH ST TO 1026-1028 MAIN ST

BUFFALO NIAGARA MEDICAL CAMPUS
NORTH END DEVELOPMENT
TRAFFIC IMPACT STUDY
PROPOSED DEVELOPMENT MAP

FIGURE 1

OCTOBER 2008

C&S COMPANIES



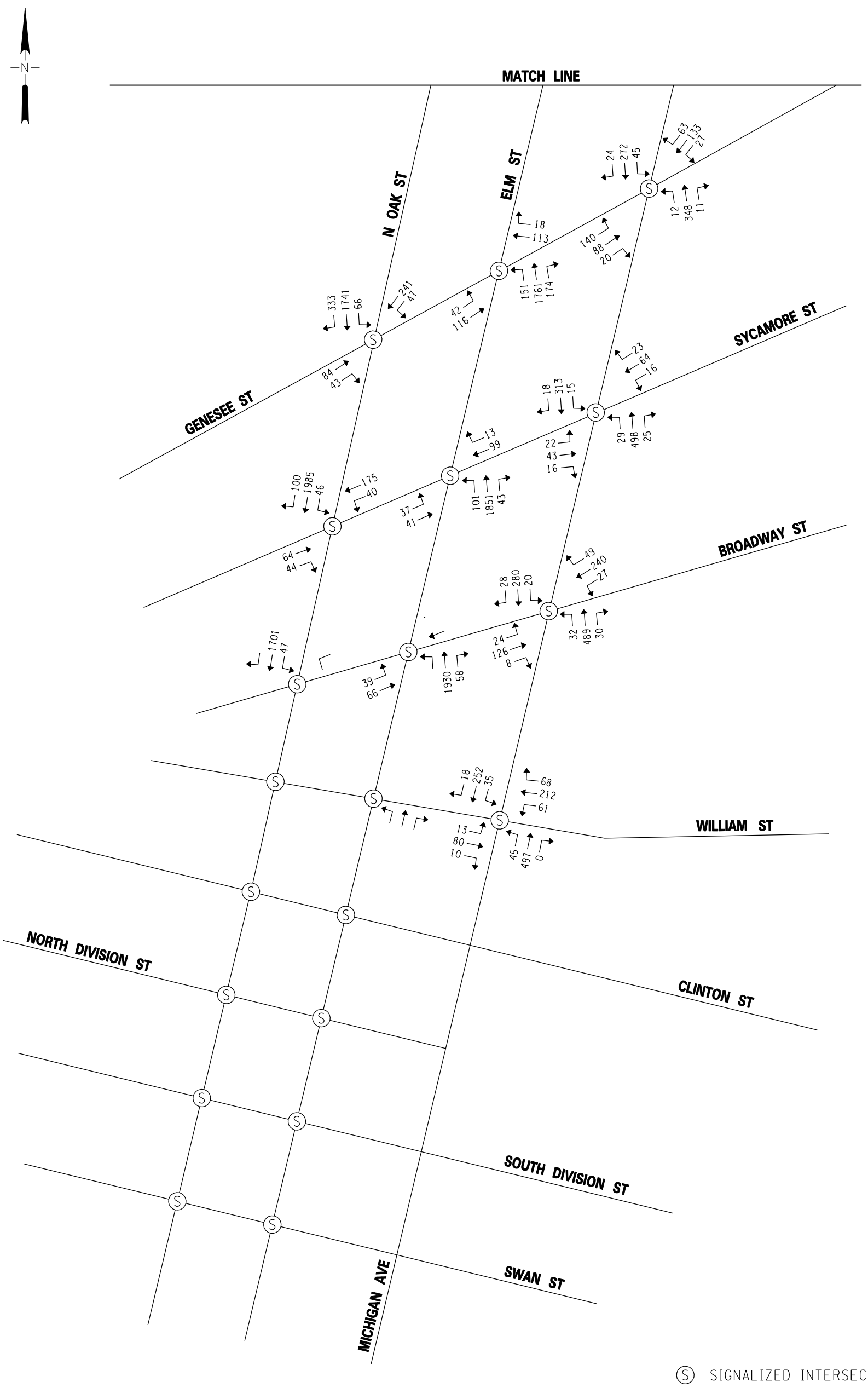
EXISTING CONDITIONS (2008) TURNING MOVEMENT VOLUMES A.M. PEAK HOUR

FIGURE 3

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



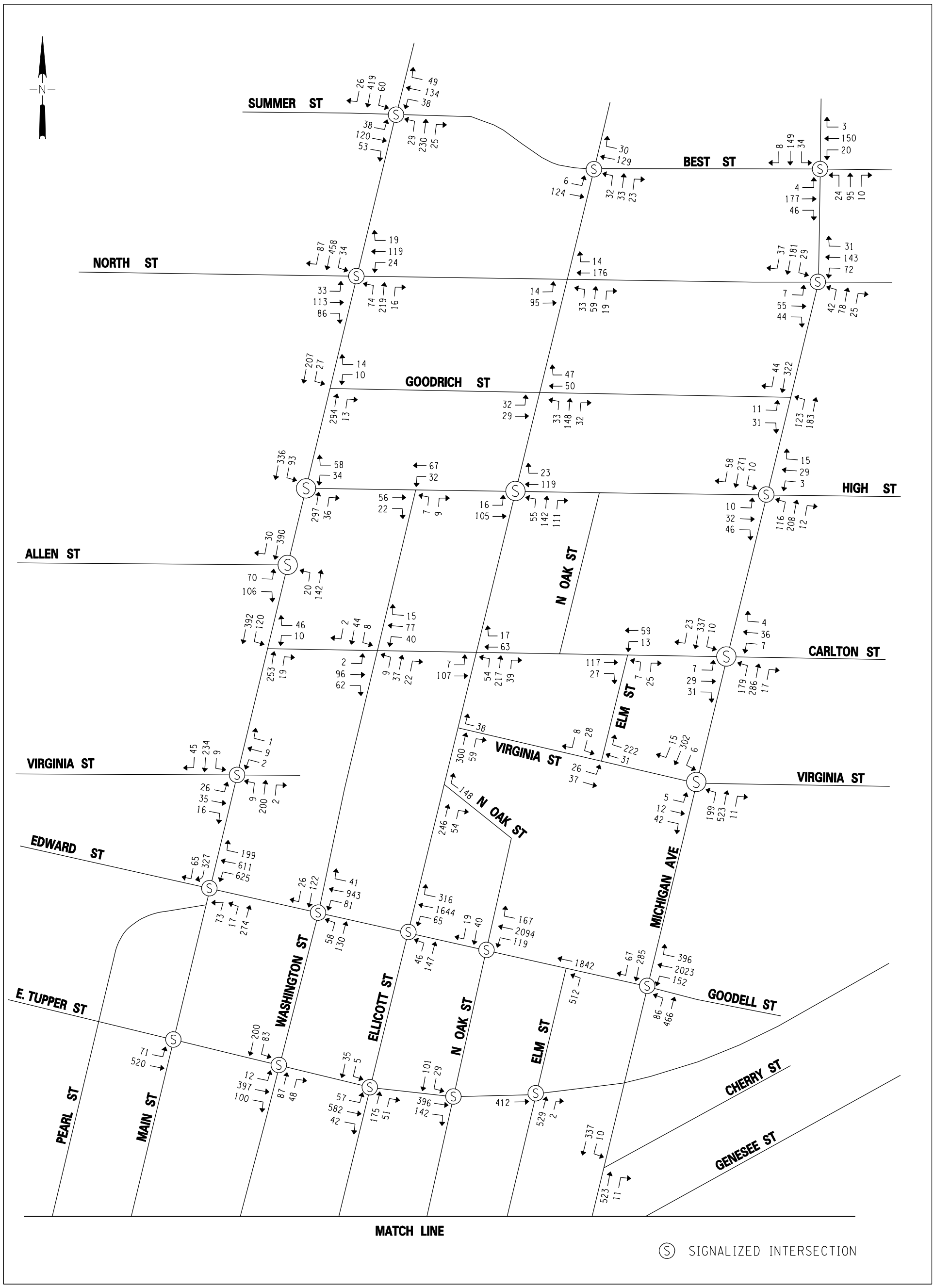
EXISTING CONDITIONS (2008) TURNING MOVEMENT VOLUMES A.M. PEAK HOUR

FIGURE 3

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES



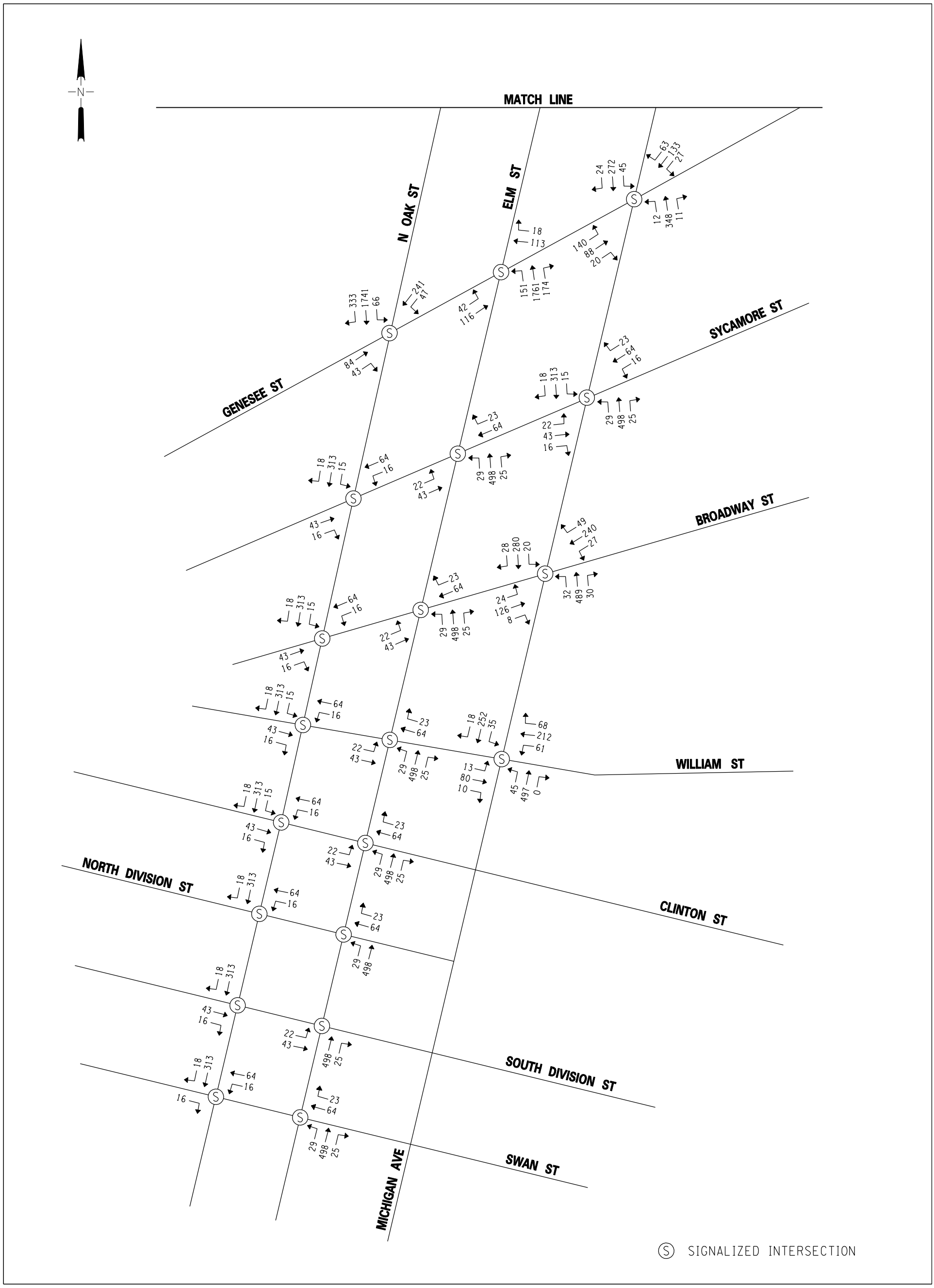
EXISTING CONDITIONS (2008) TURNING MOVEMENT VOLUMES P.M. PEAK HOUR

FIGURE 4

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



EXISTING CONDITIONS (2008) TURNING MOVEMENT VOLUMES P.M. PEAK HOUR

FIGURE 4

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES

Figure 6: AM Peak Hour Pedestrian Volumes
(from Draft Existing Conditions Traffic Study, HSH)

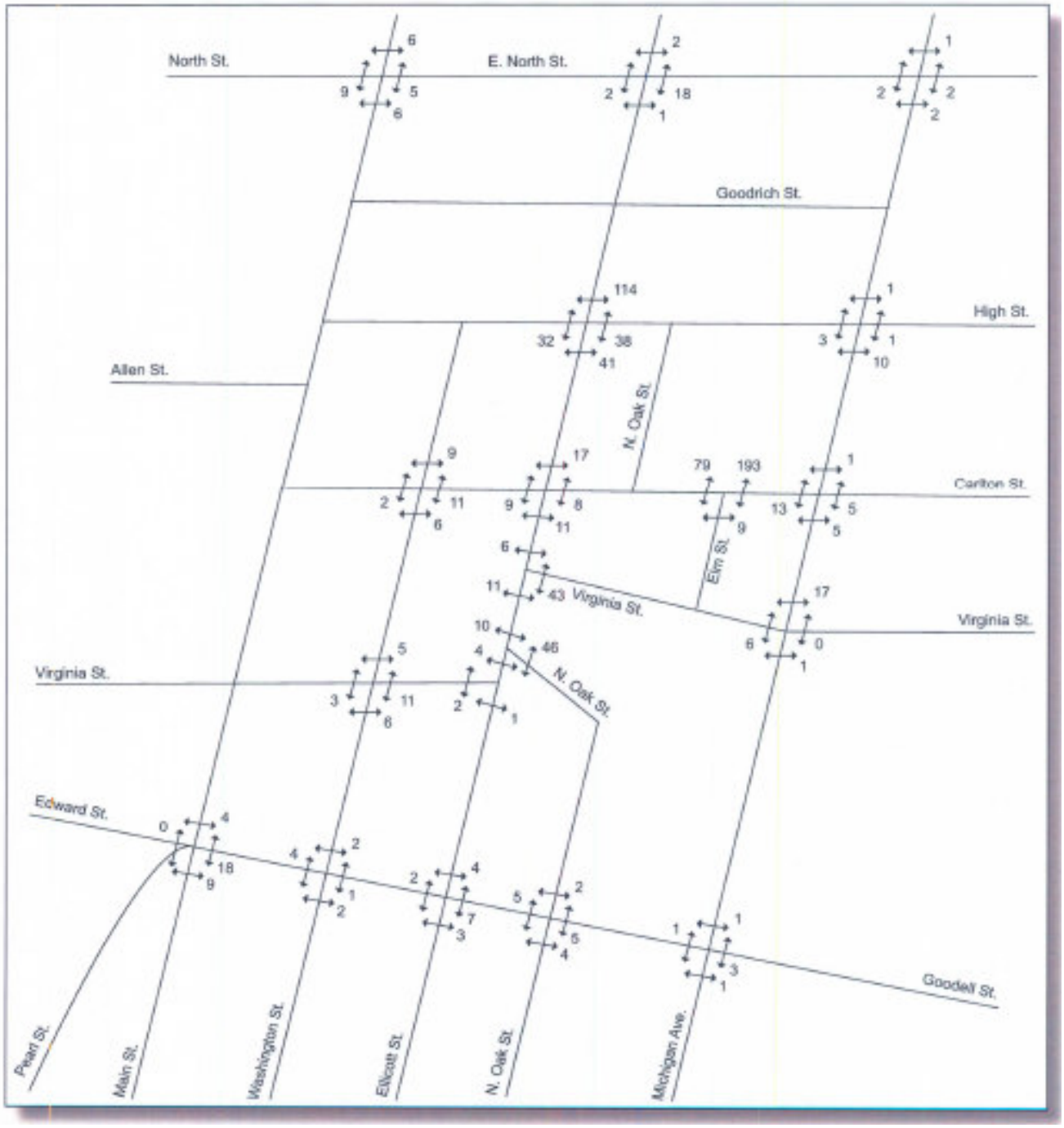
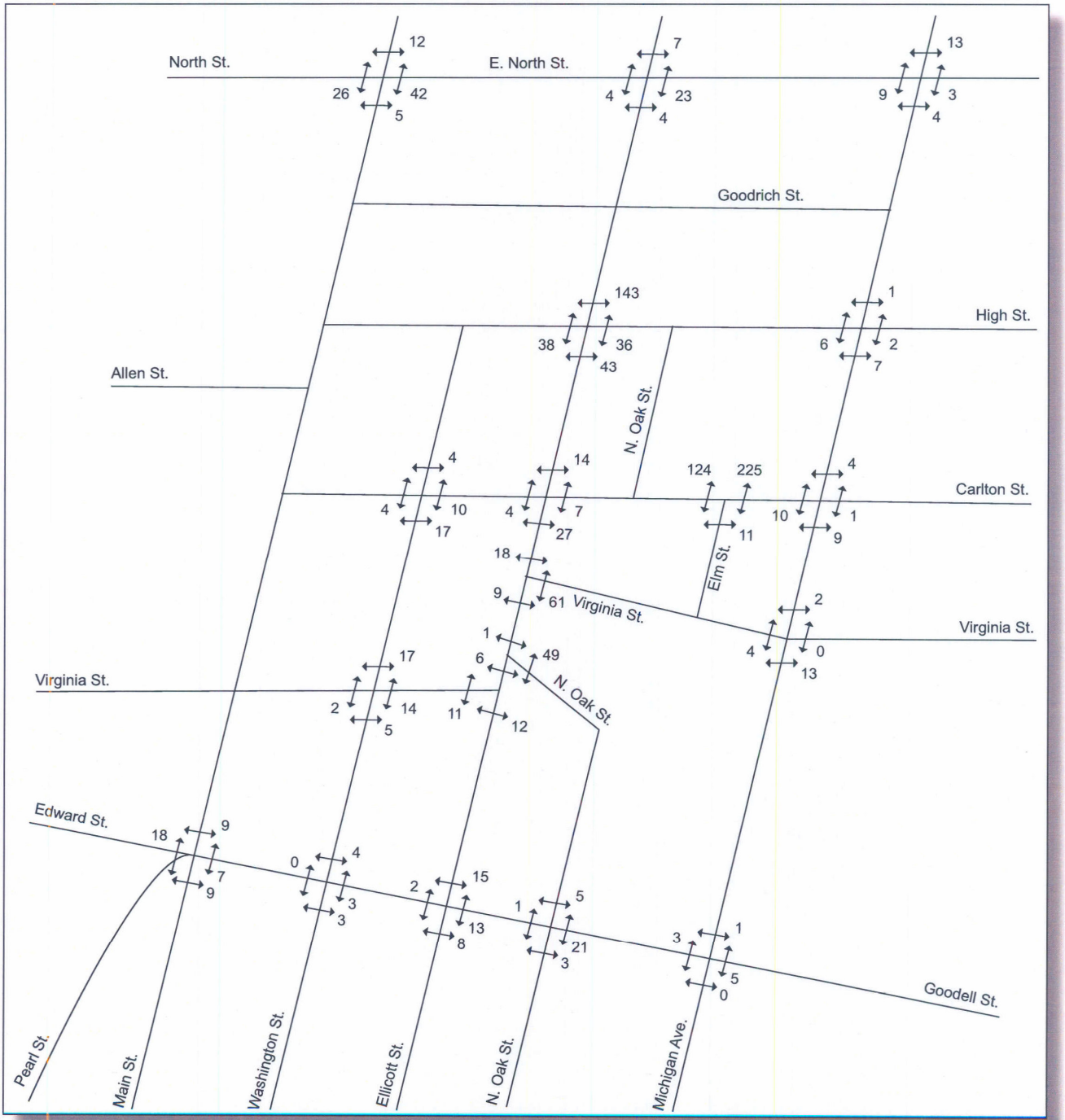
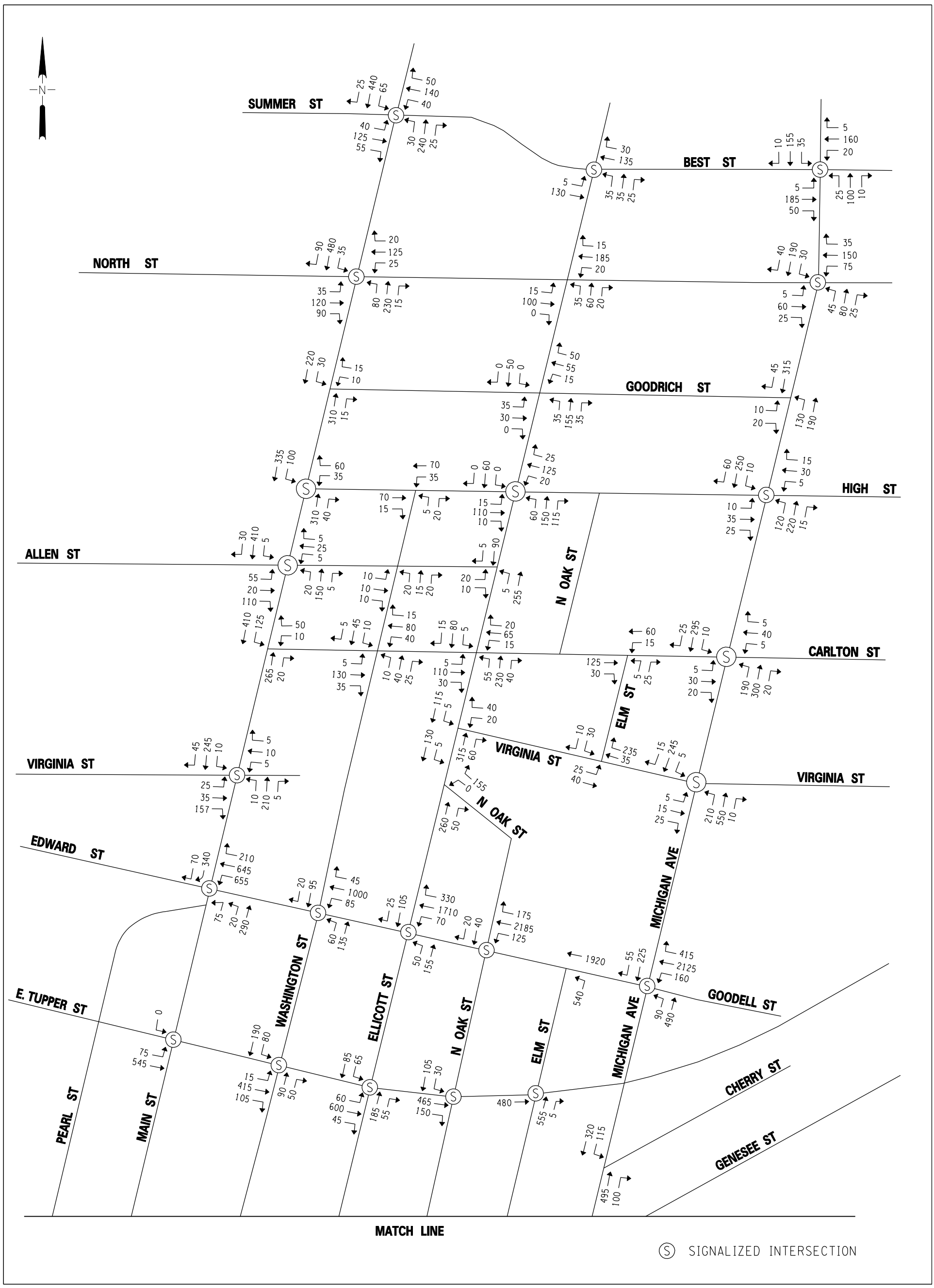


Figure 7: PM Peak Hour Pedestrian Volumes
(from Draft Existing Conditions Traffic Study, HSH)





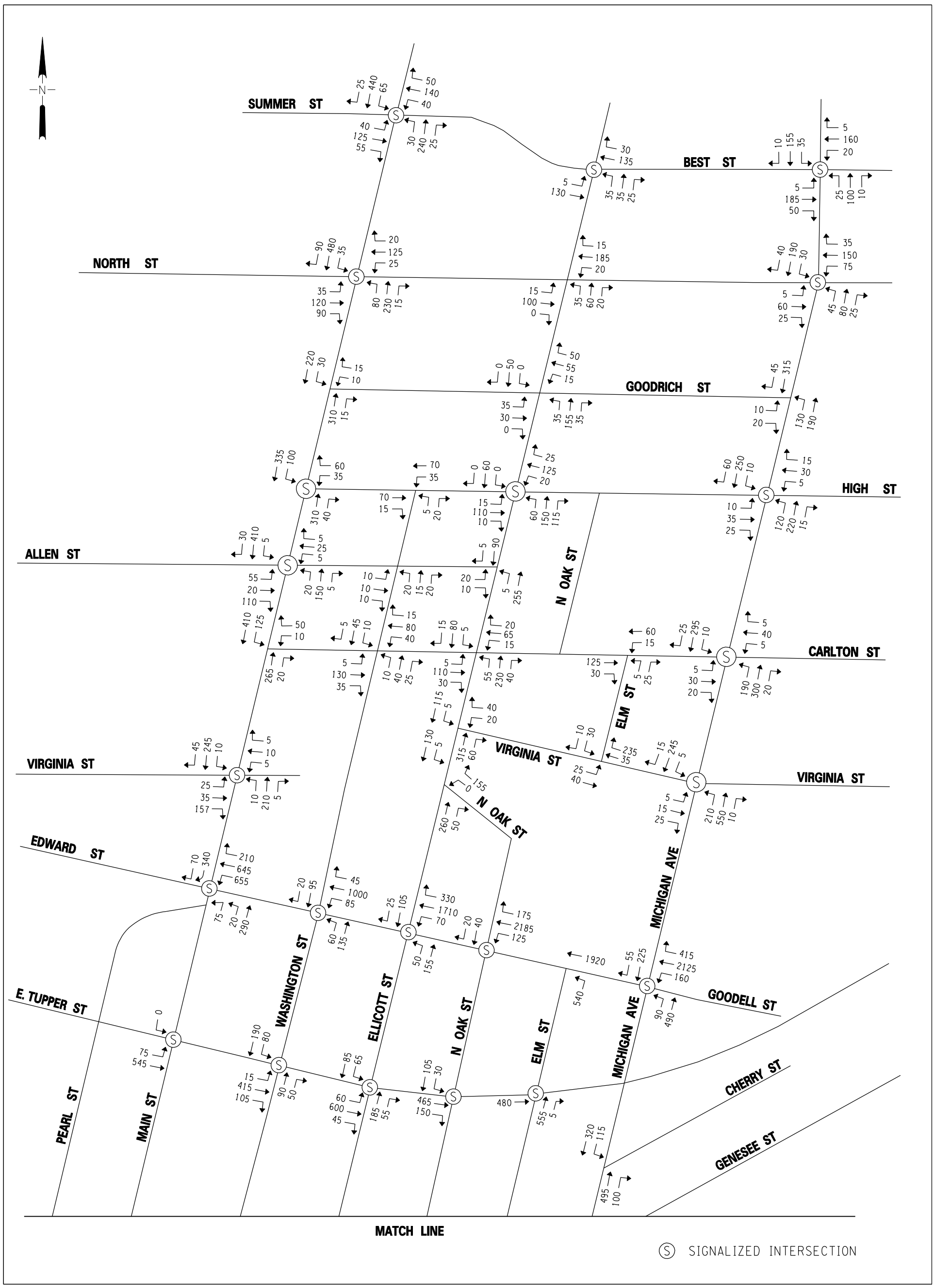
NO BUILD CONDITIONS (2013)
A.M. PEAK HOUR

FIGURE 8

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



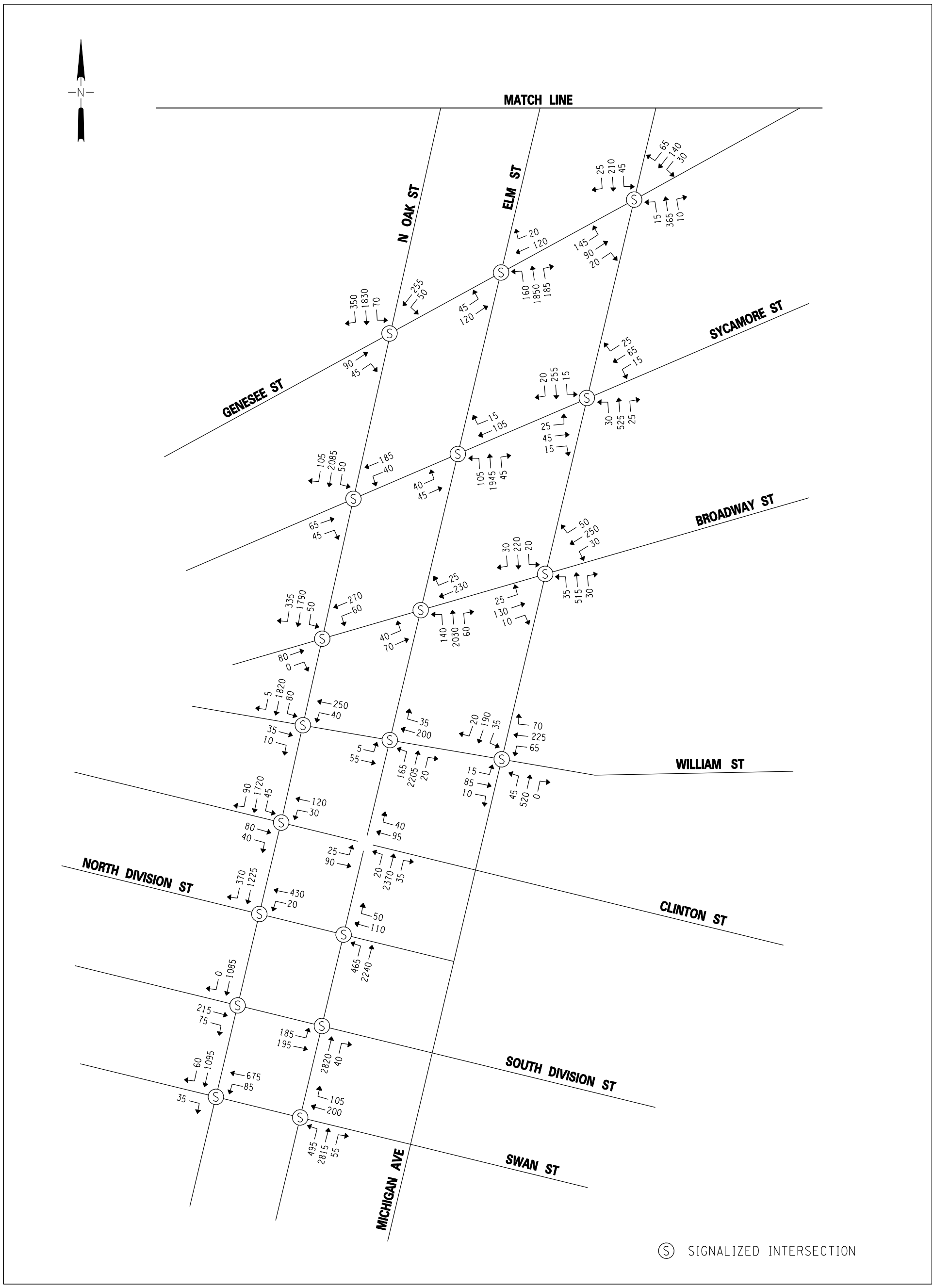
NO BUILD CONDITIONS (2013)
A.M. PEAK HOUR

FIGURE 8

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



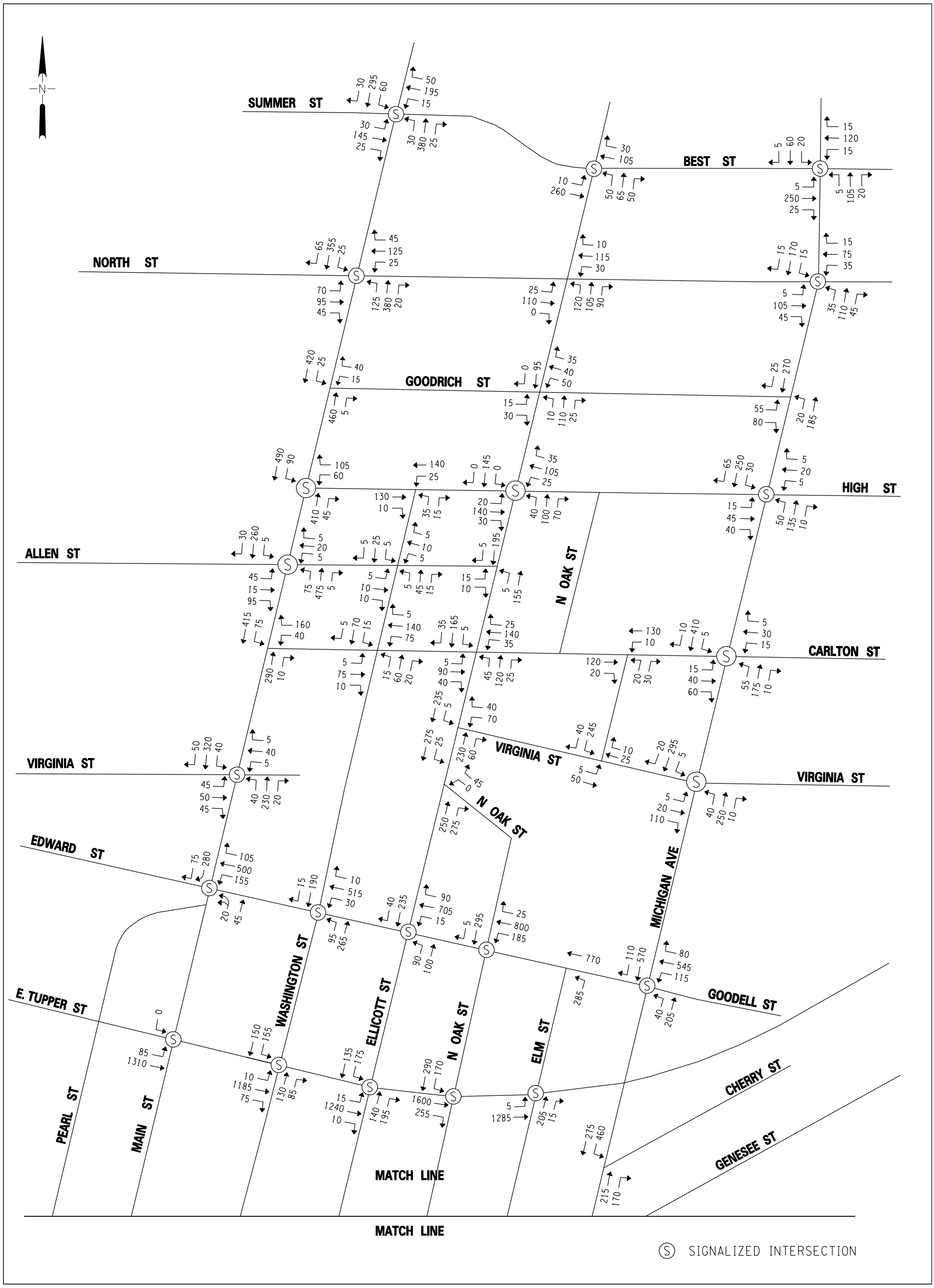
NO BUILD CONDITIONS (2013)
A.M. PEAK HOUR

FIGURE 8

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES



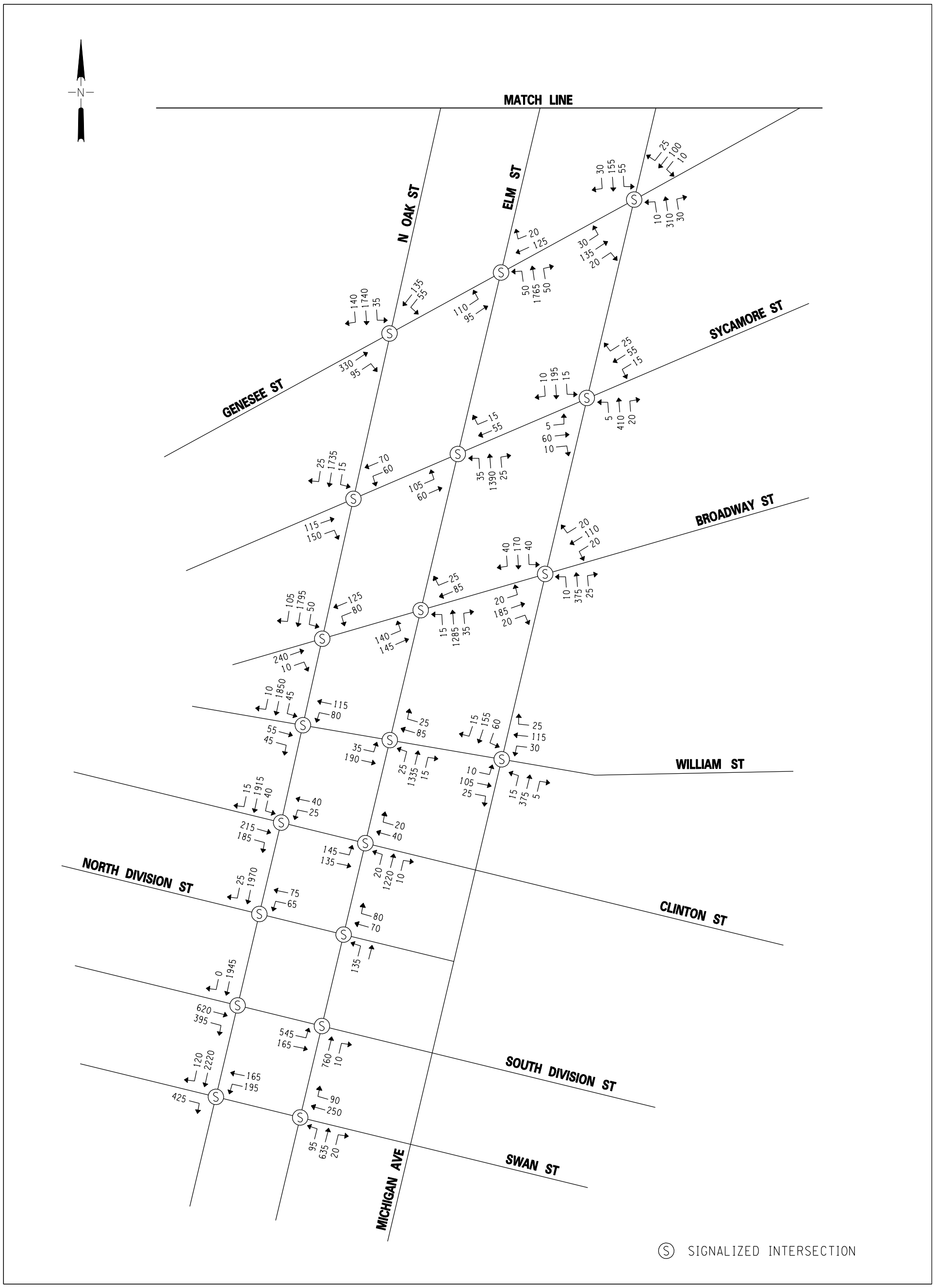
NO BUILD CONDITIONS (2013)
P.M. PEAK HOUR

FIGURE 9

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



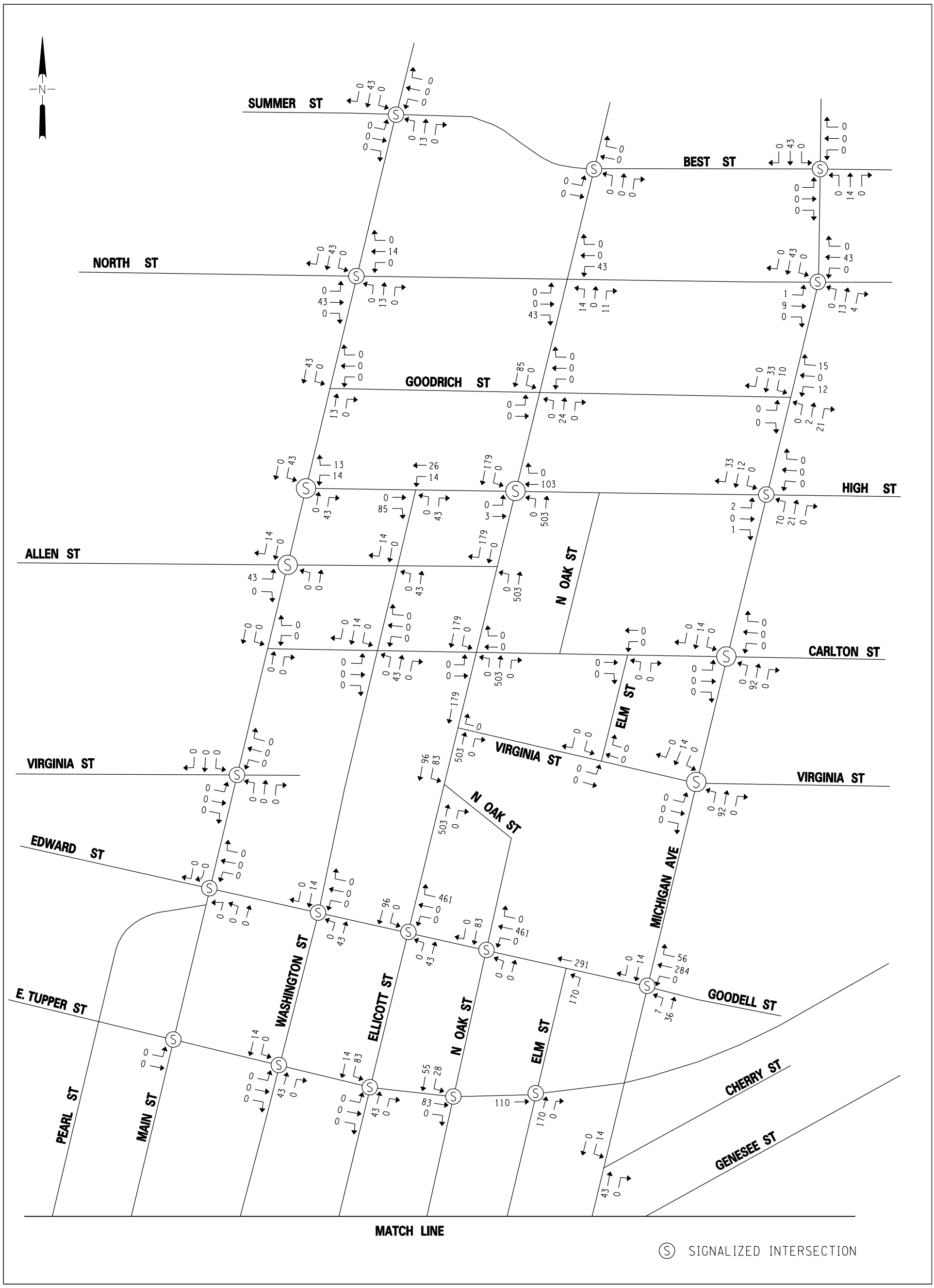
NO BUILD CONDITIONS (2013)
P.M. PEAK HOUR

FIGURE 9

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES

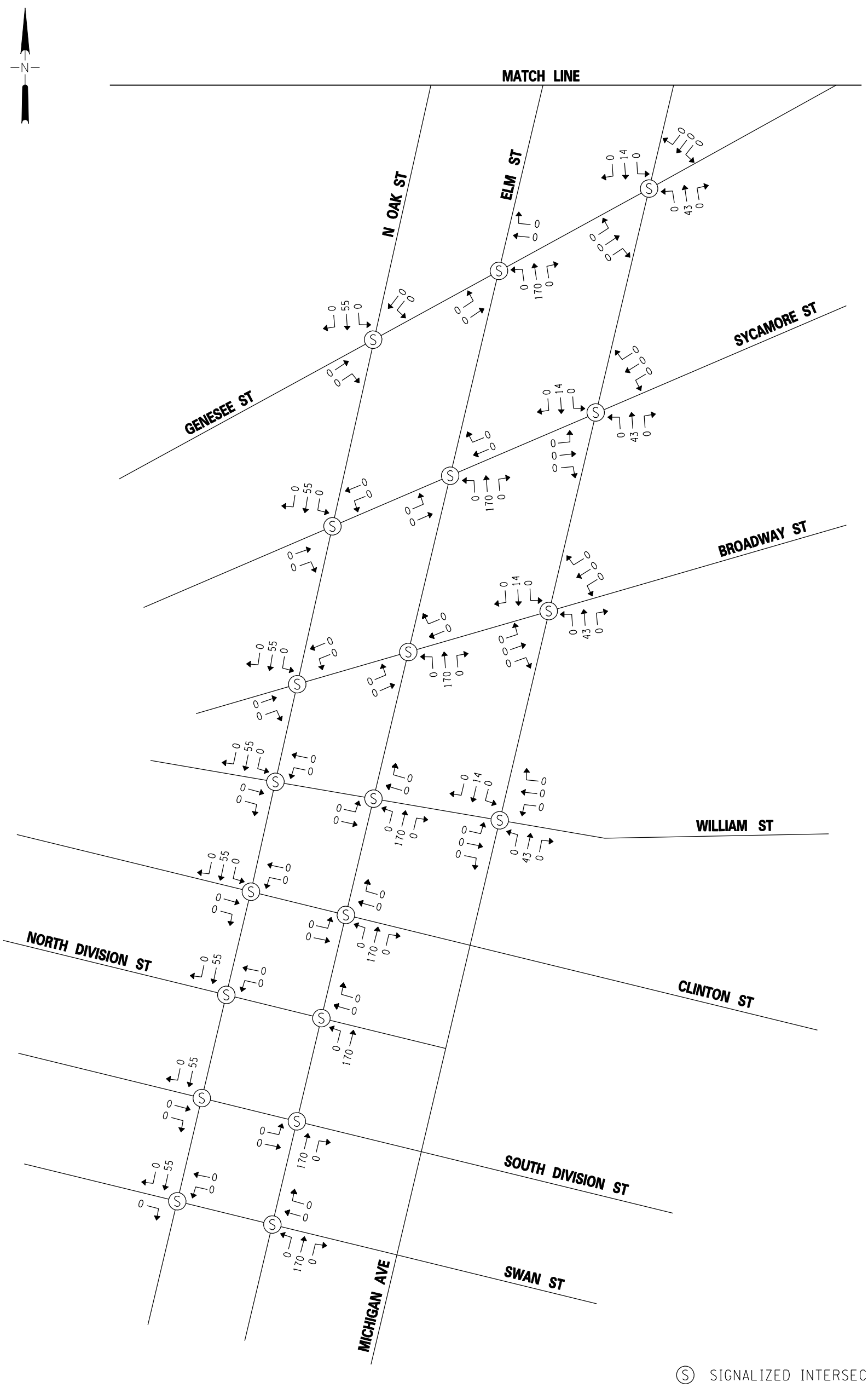


SCENARIO #1 (2013)
PROJECT TRIPS
AM PEAK HOUR

FIGURE 14

OCTOBER 2008

C&S COMPANIES



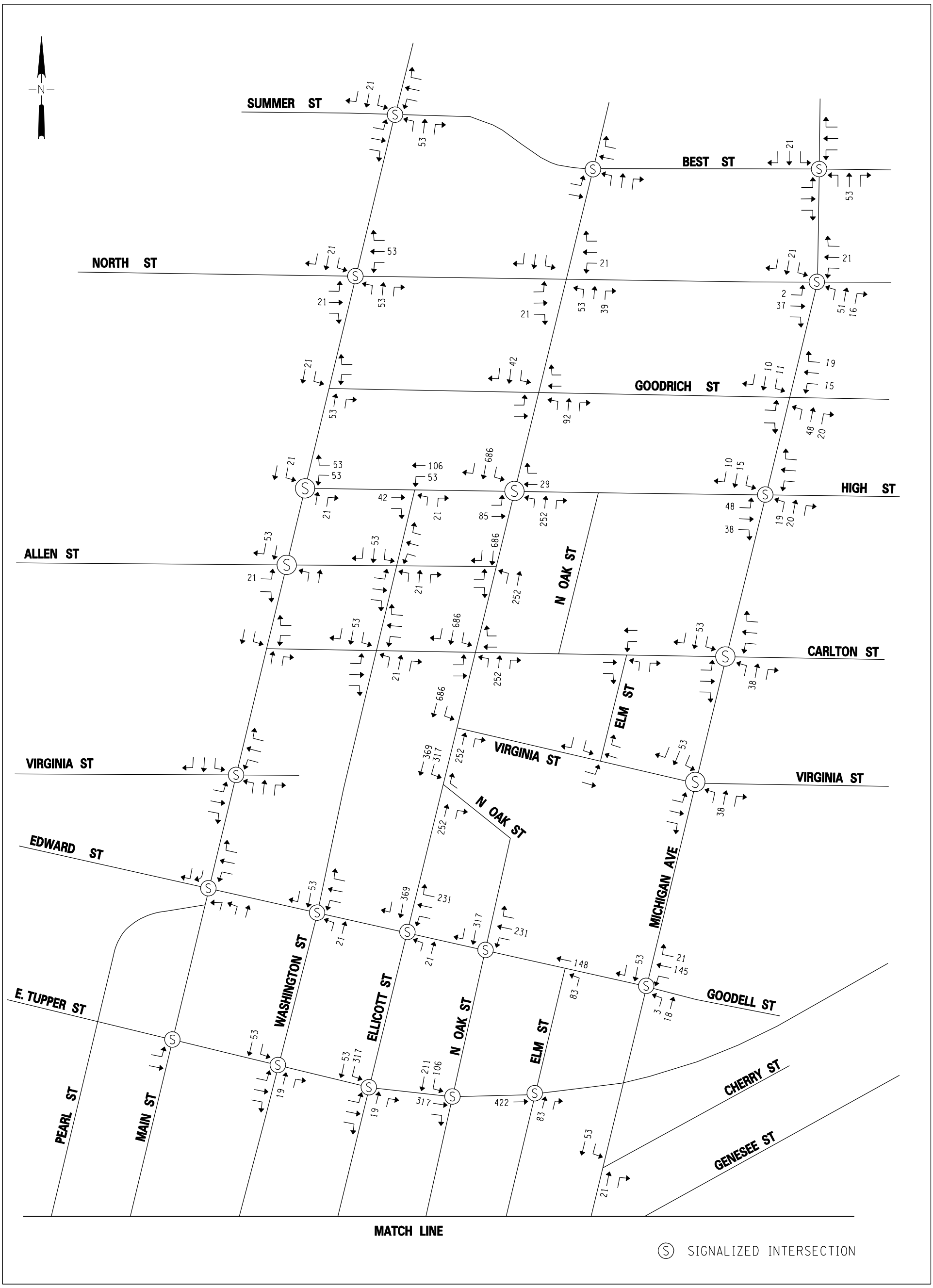
SCENARIO #1 (2013)
PROJECT TRIPS
AM PEAK HOUR

FIGURE 14

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES



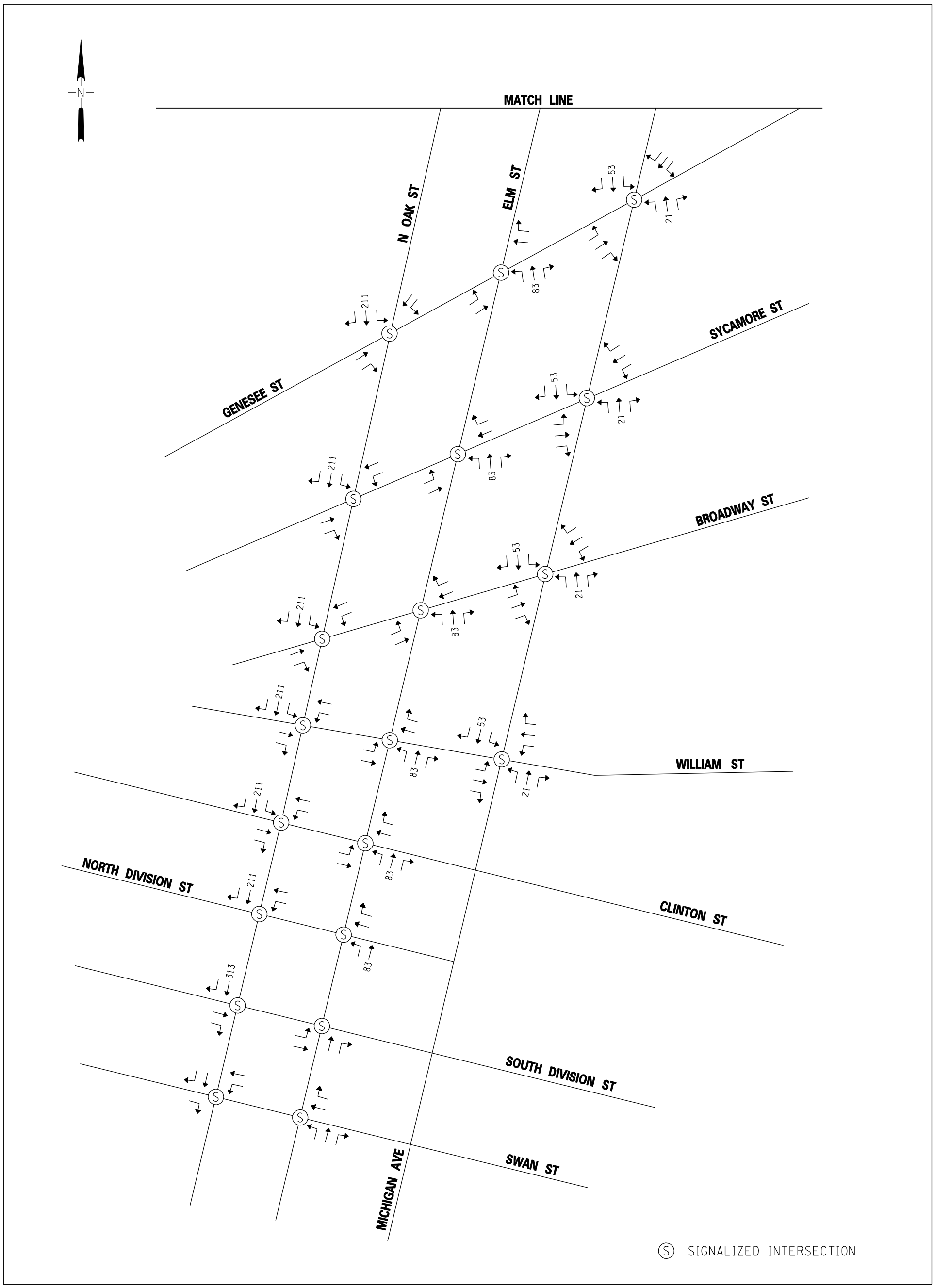
SCENARIO #1 (2013)
PROJECT TRIPS
PM PEAK HOUR

FIGURE 15

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



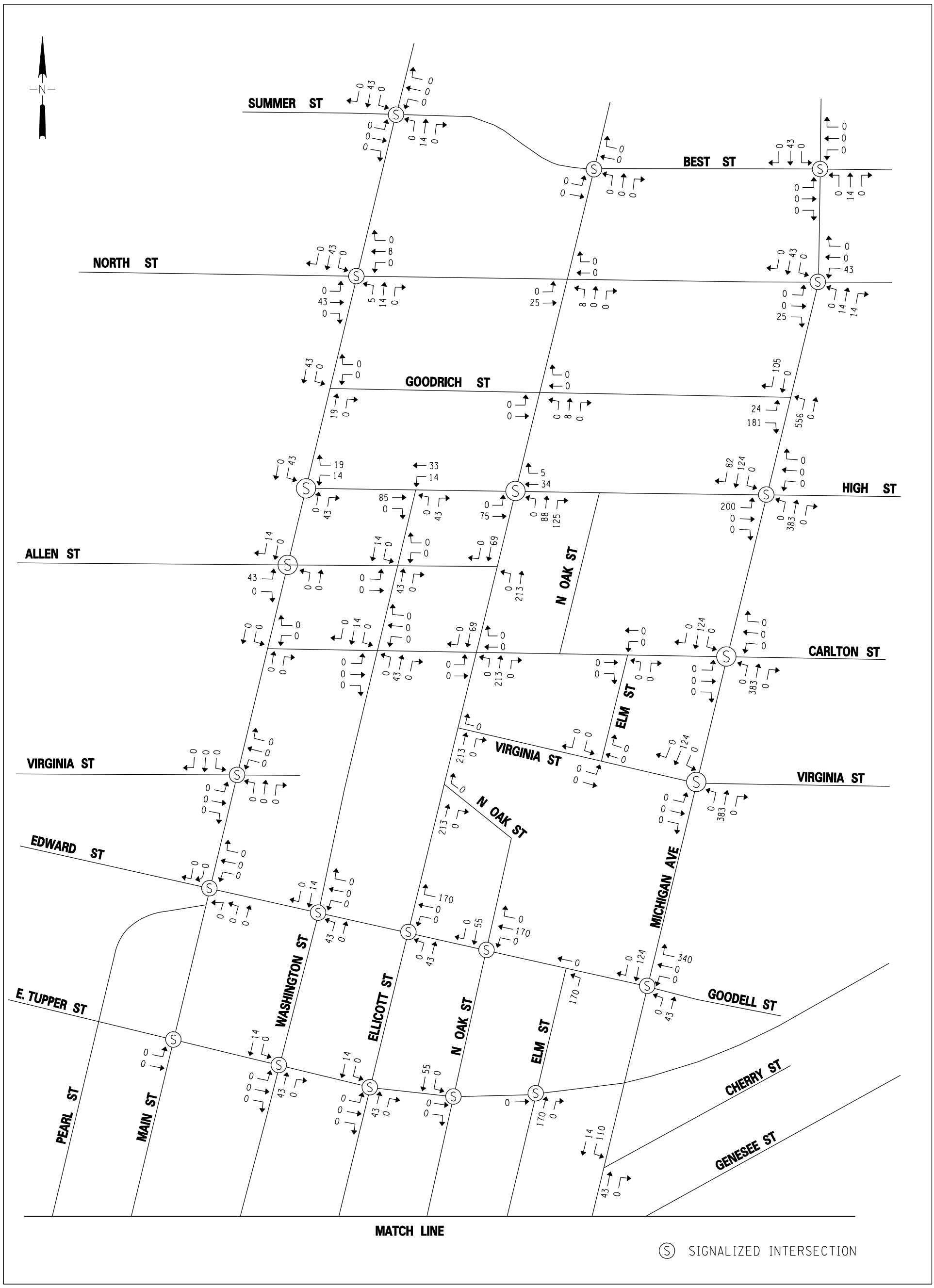
SCENARIO #1 (2013)
PROJECT TRIPS
PM PEAK HOUR

FIGURE 15

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES



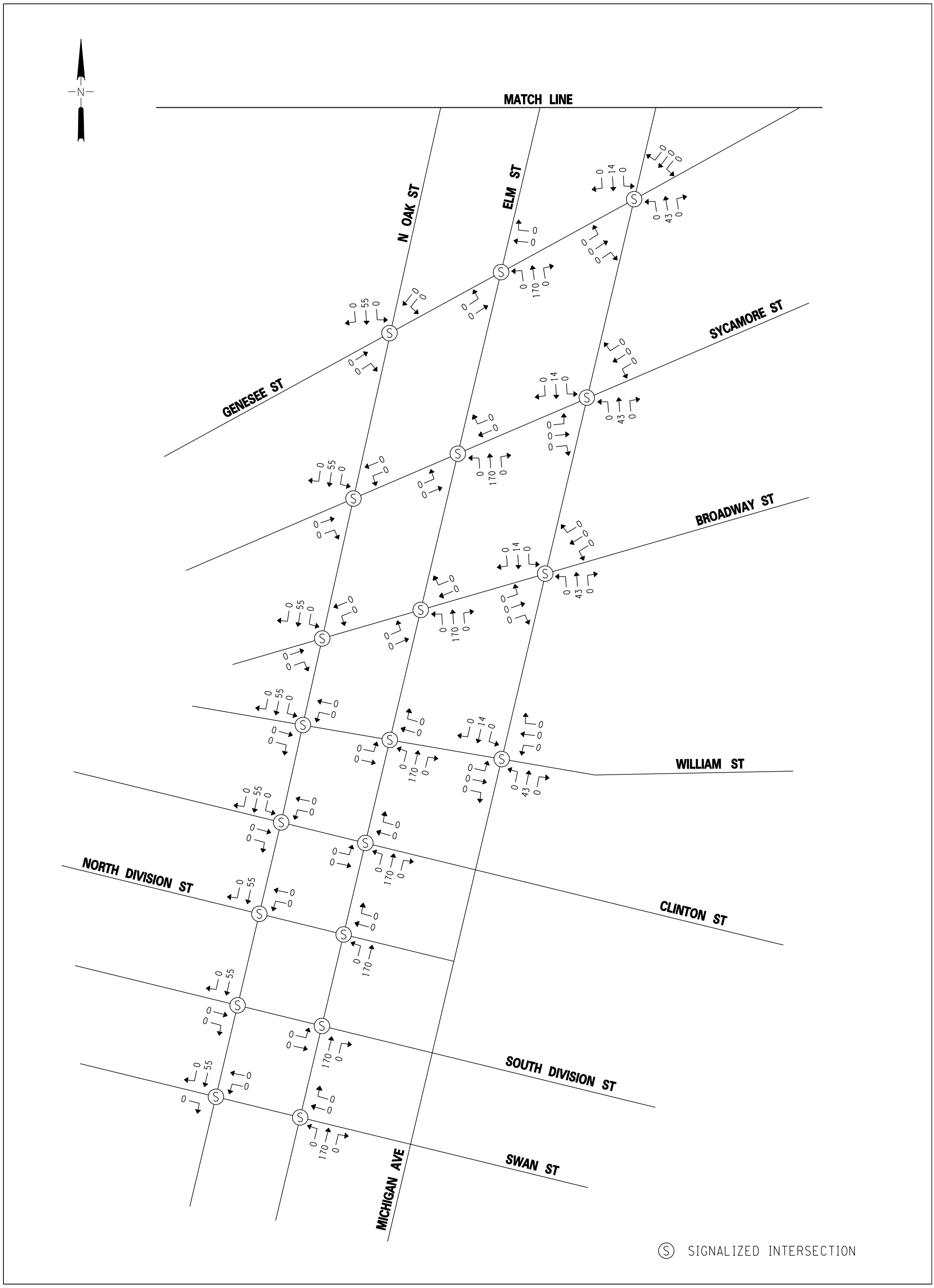
SCENARIO #2 (2013)
PROJECT TRIPS
AM PEAK HOUR

FIGURE 16

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



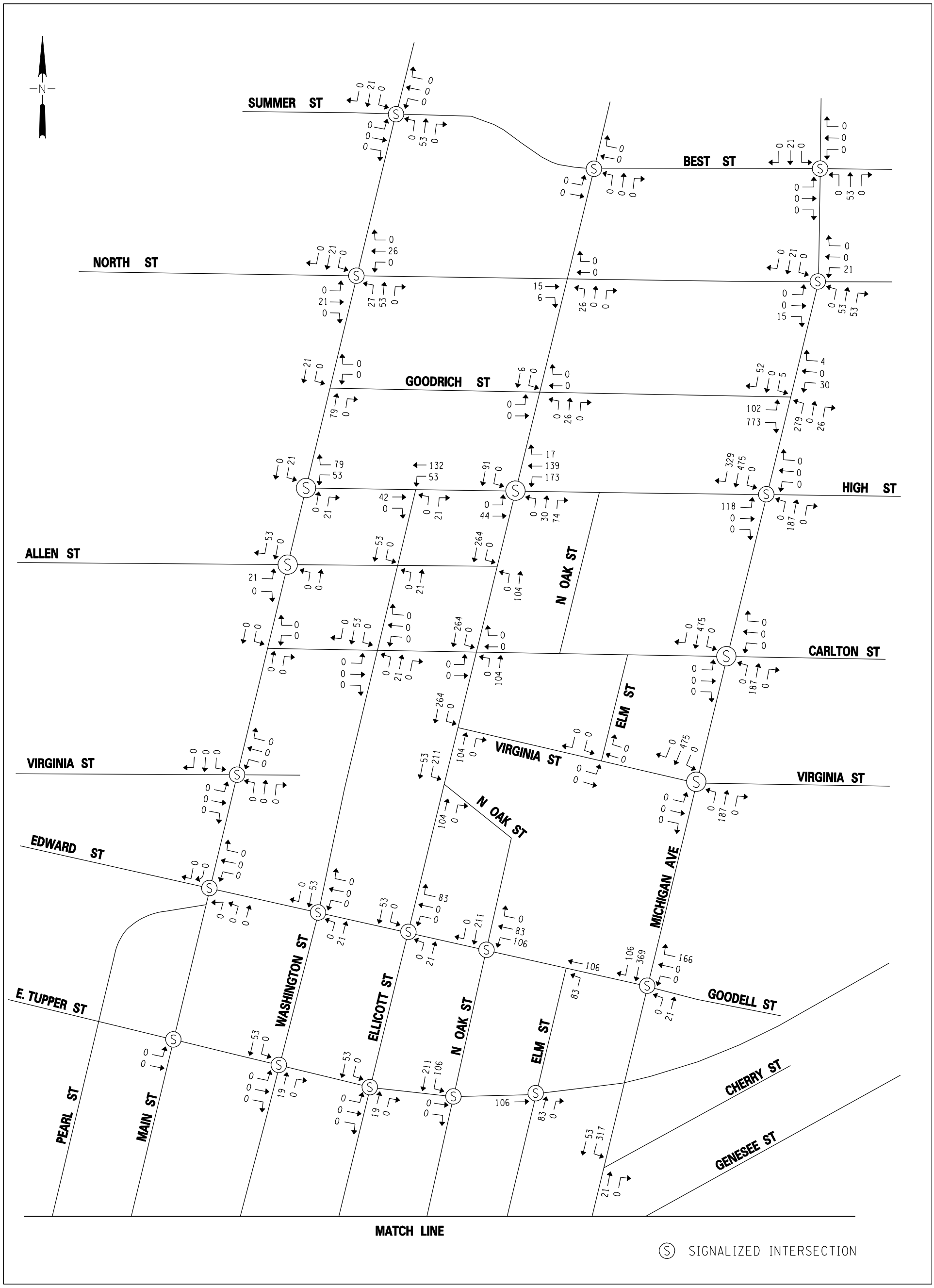
SCENARIO #2 (2013)
PROJECT TRIPS
AM PEAK HOUR

FIGURE 16

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES



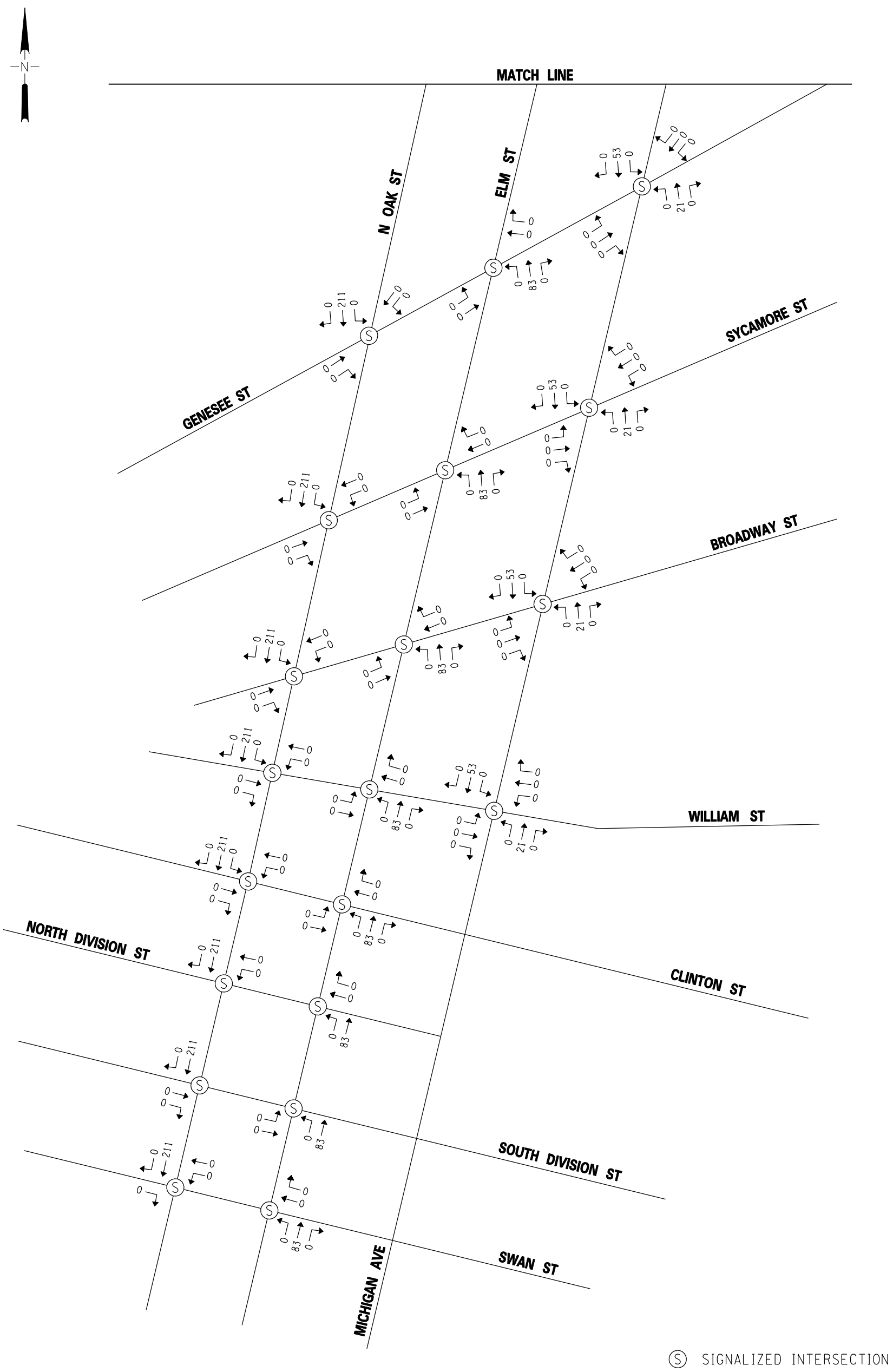
SCENARIO #2 (2013)
PROJECT TRIPS
PM PEAK HOUR

FIGURE 17

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



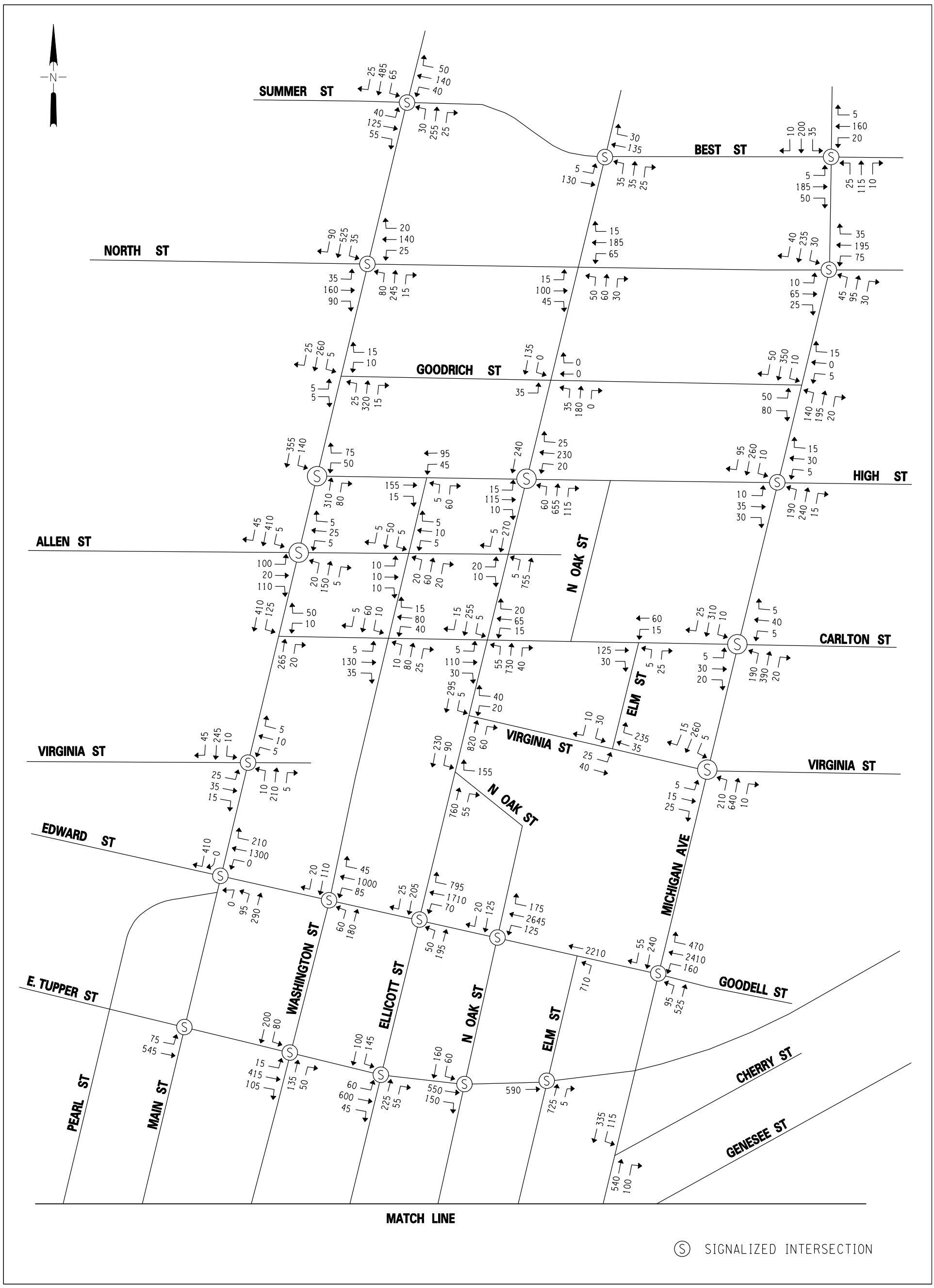
SCENARIO #2 (2013)
PROJECT TRIPS
PM PEAK HOUR

FIGURE 17

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES



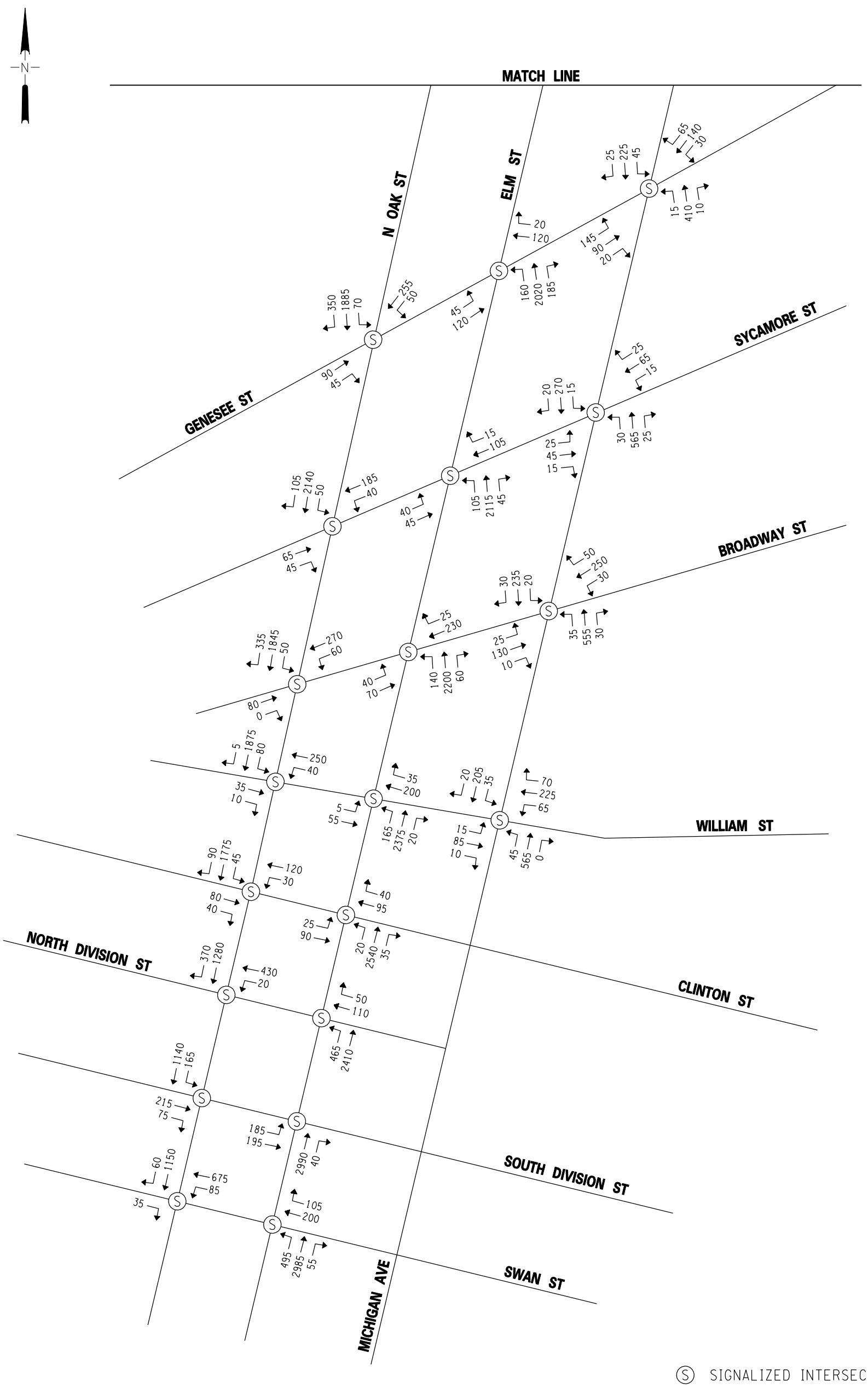
SCENARIO #1 (2013)
TOTAL TRIPS
AM PEAK HOUR

FIGURE 18

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



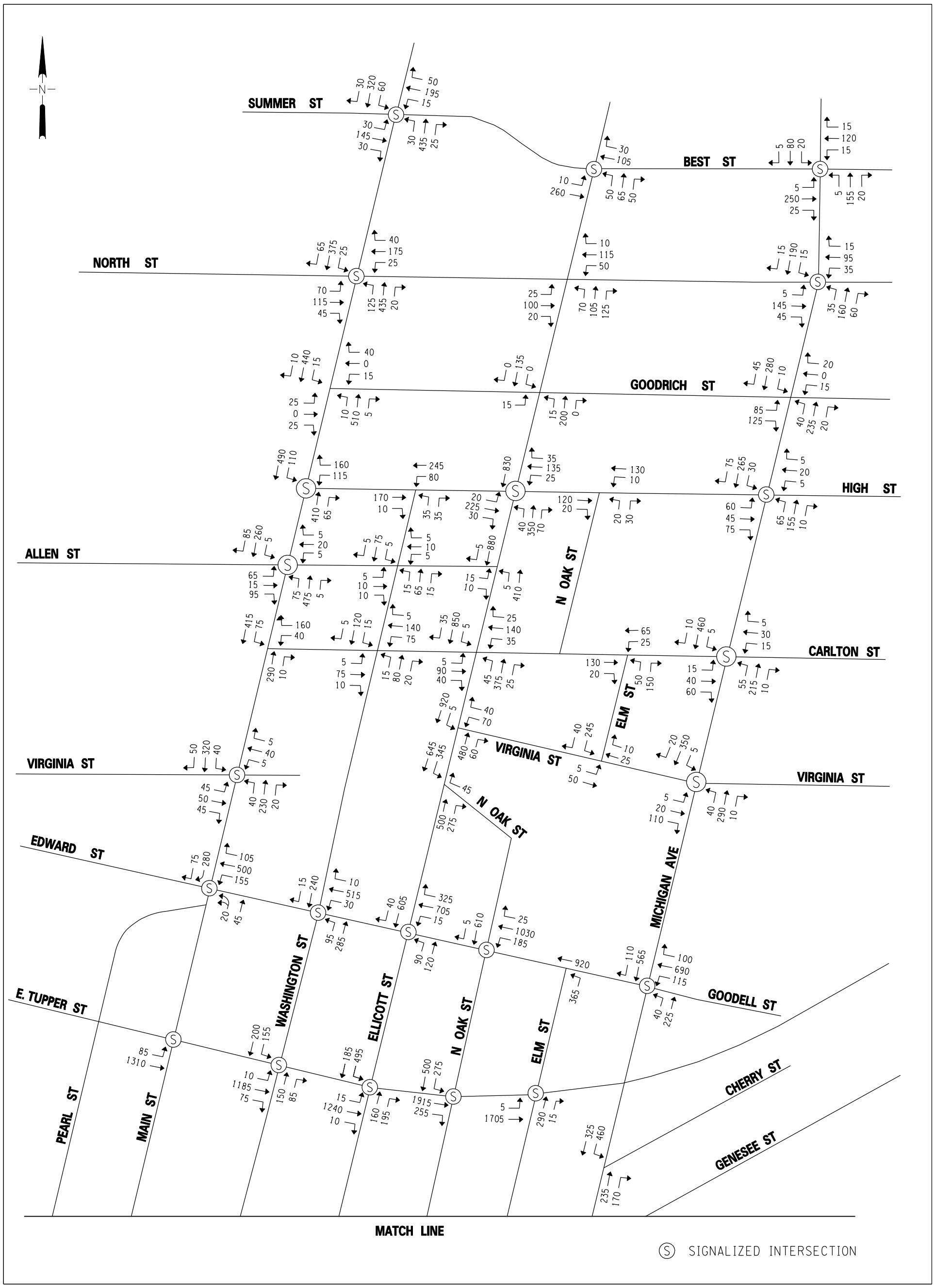
SCENARIO #1 (2013)
TOTAL TRIPS
AM PEAK HOUR

FIGURE 18

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES



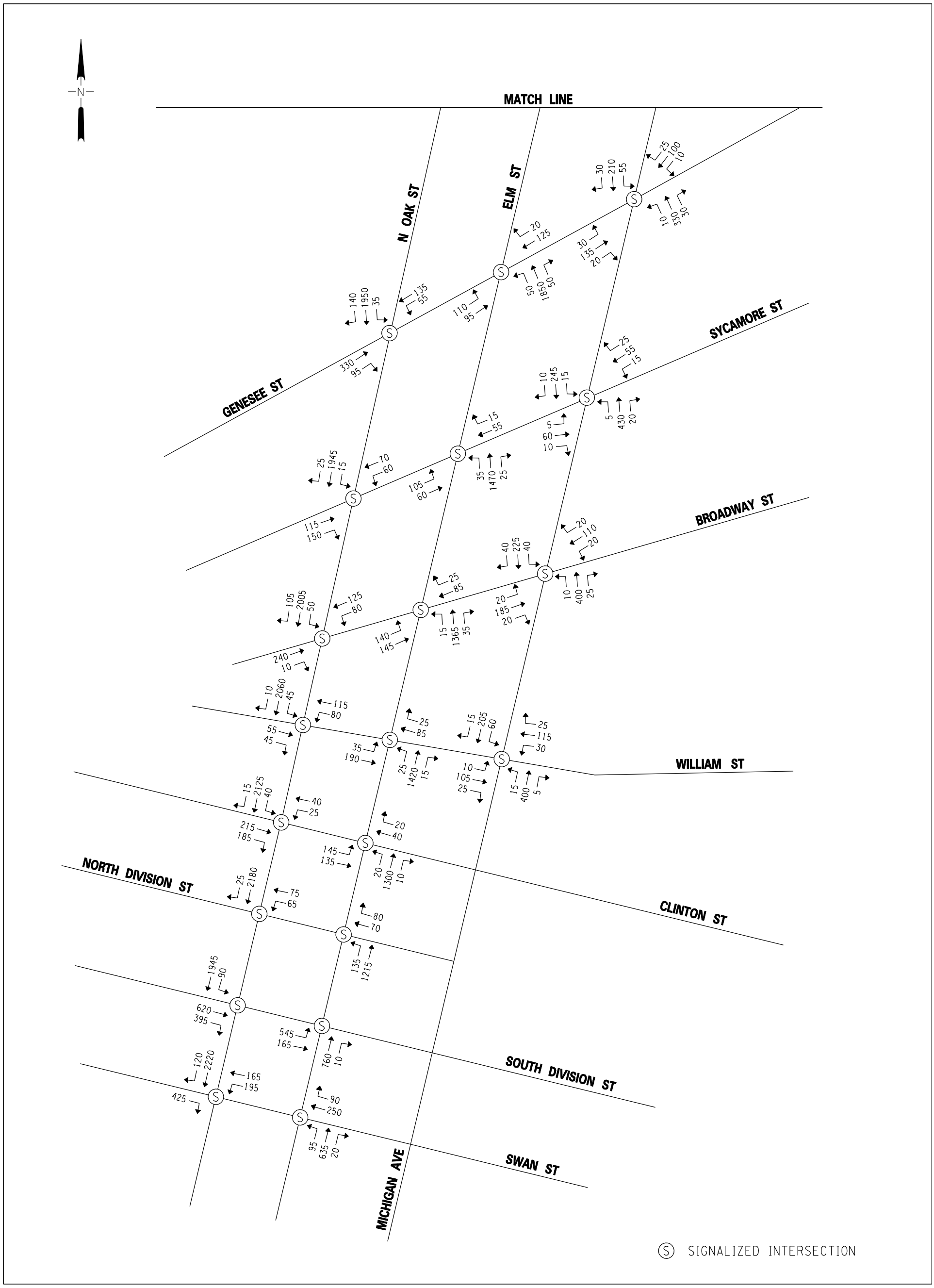
SCENARIO #1 (2013)
TOTAL TRIPS
PM PEAK HOUR

FIGURE 19

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



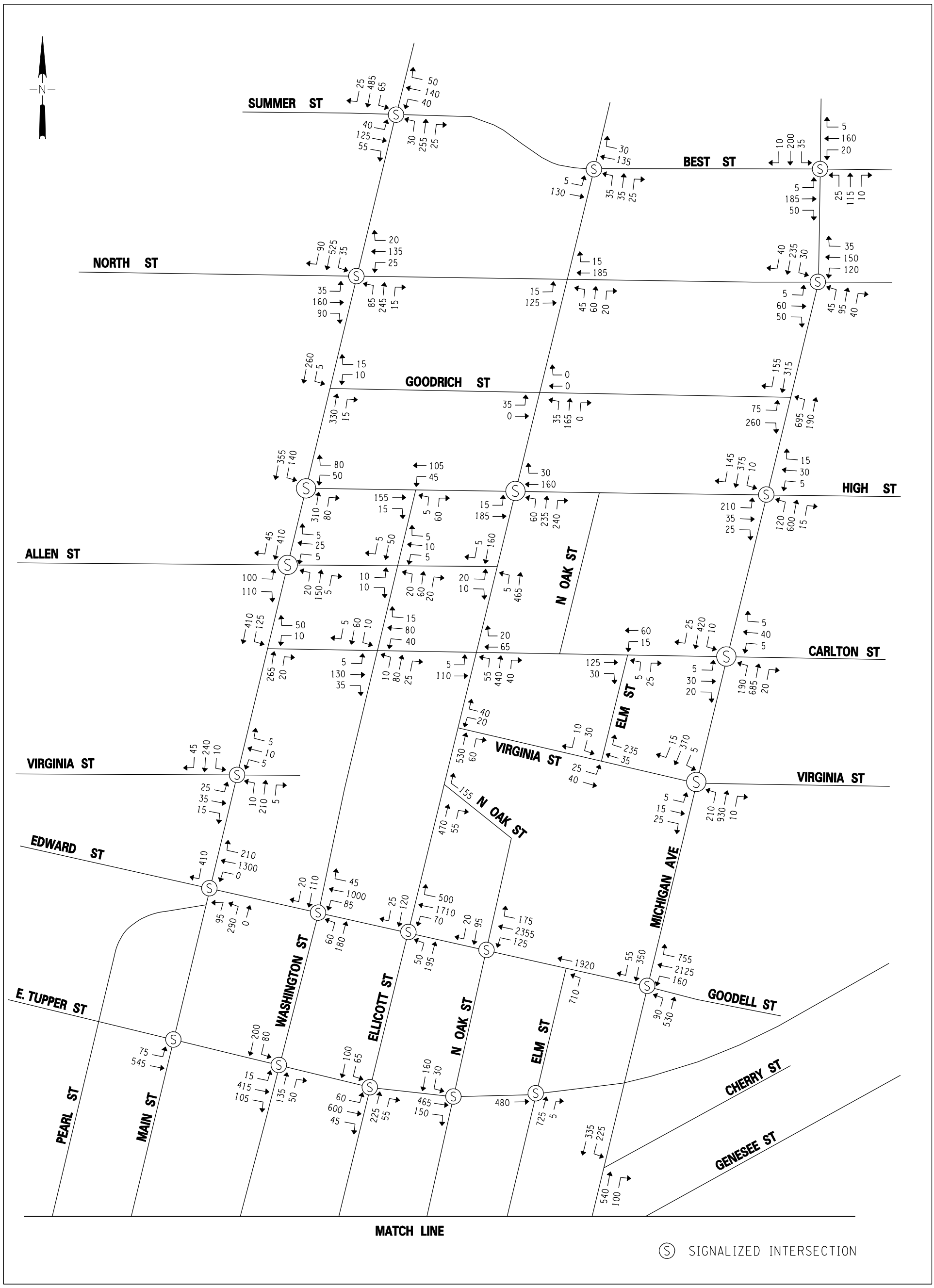
SCENARIO #1 (2013)
TOTAL TRIPS
PM PEAK HOUR

FIGURE 19

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES



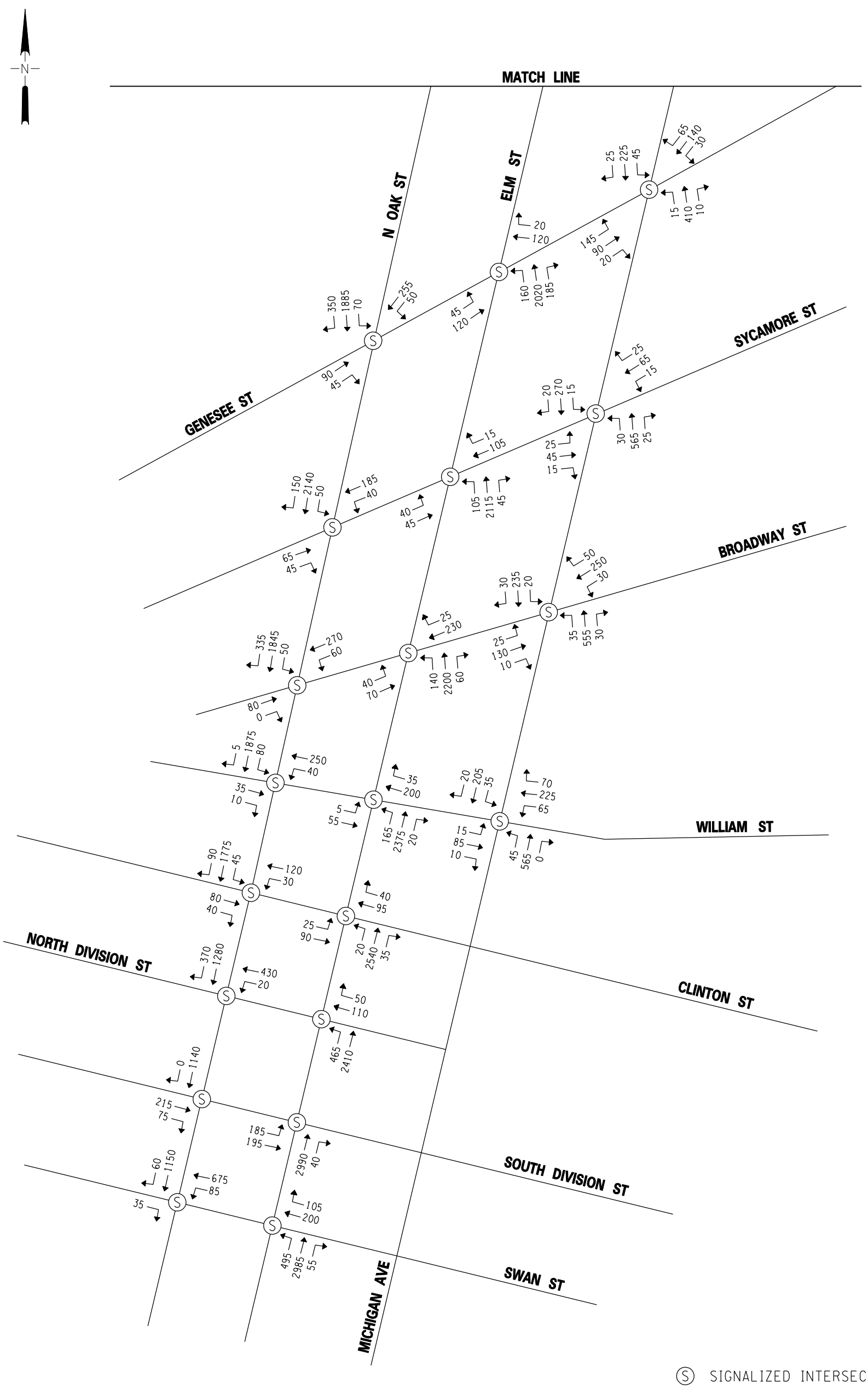
SCENARIO #2 (2013)
TOTAL TRIPS
AM PEAK HOUR

FIGURE 20

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



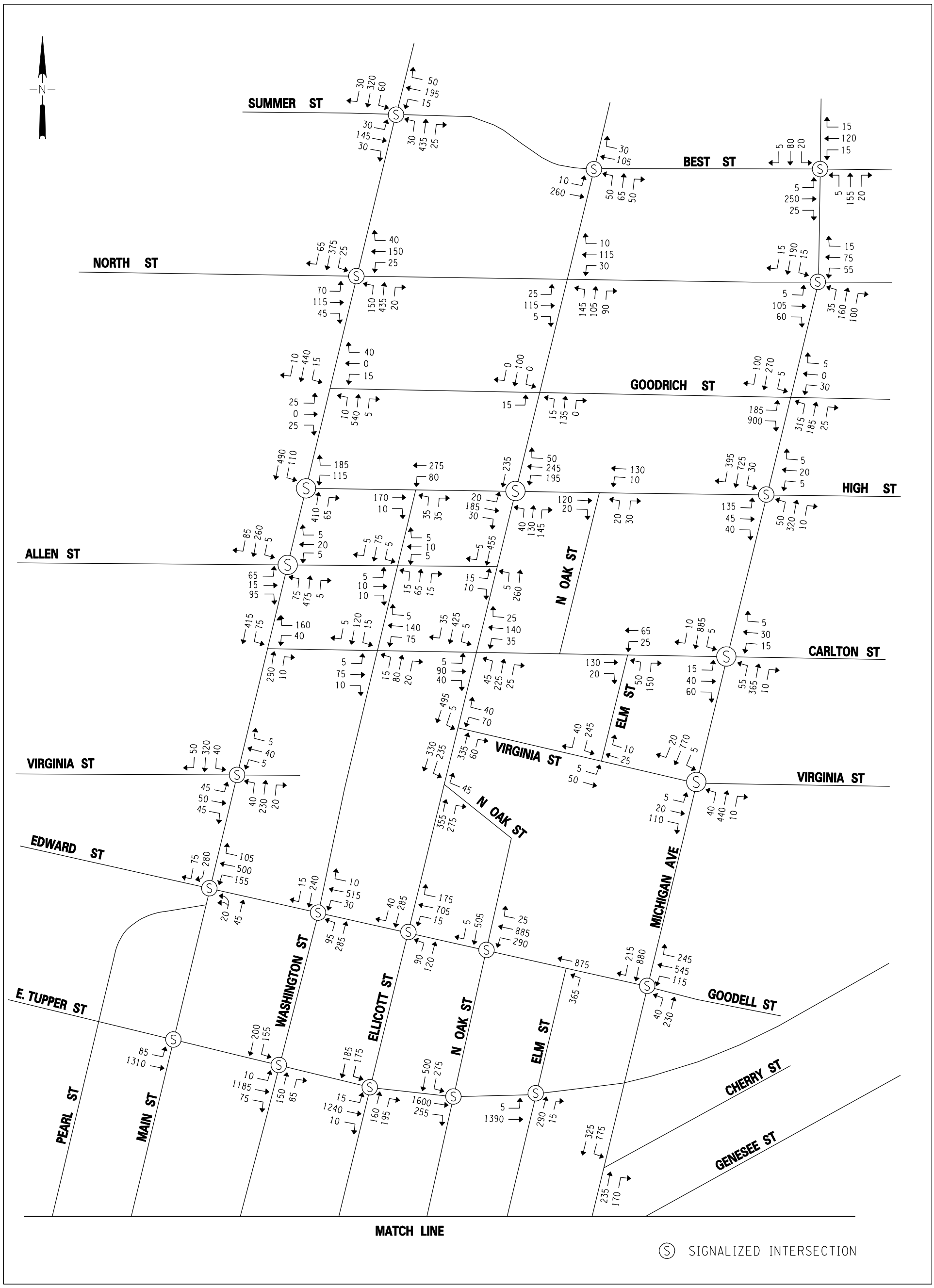
SCENARIO #2 (2013)
TOTAL TRIPS
AM PEAK HOUR

FIGURE 20

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES



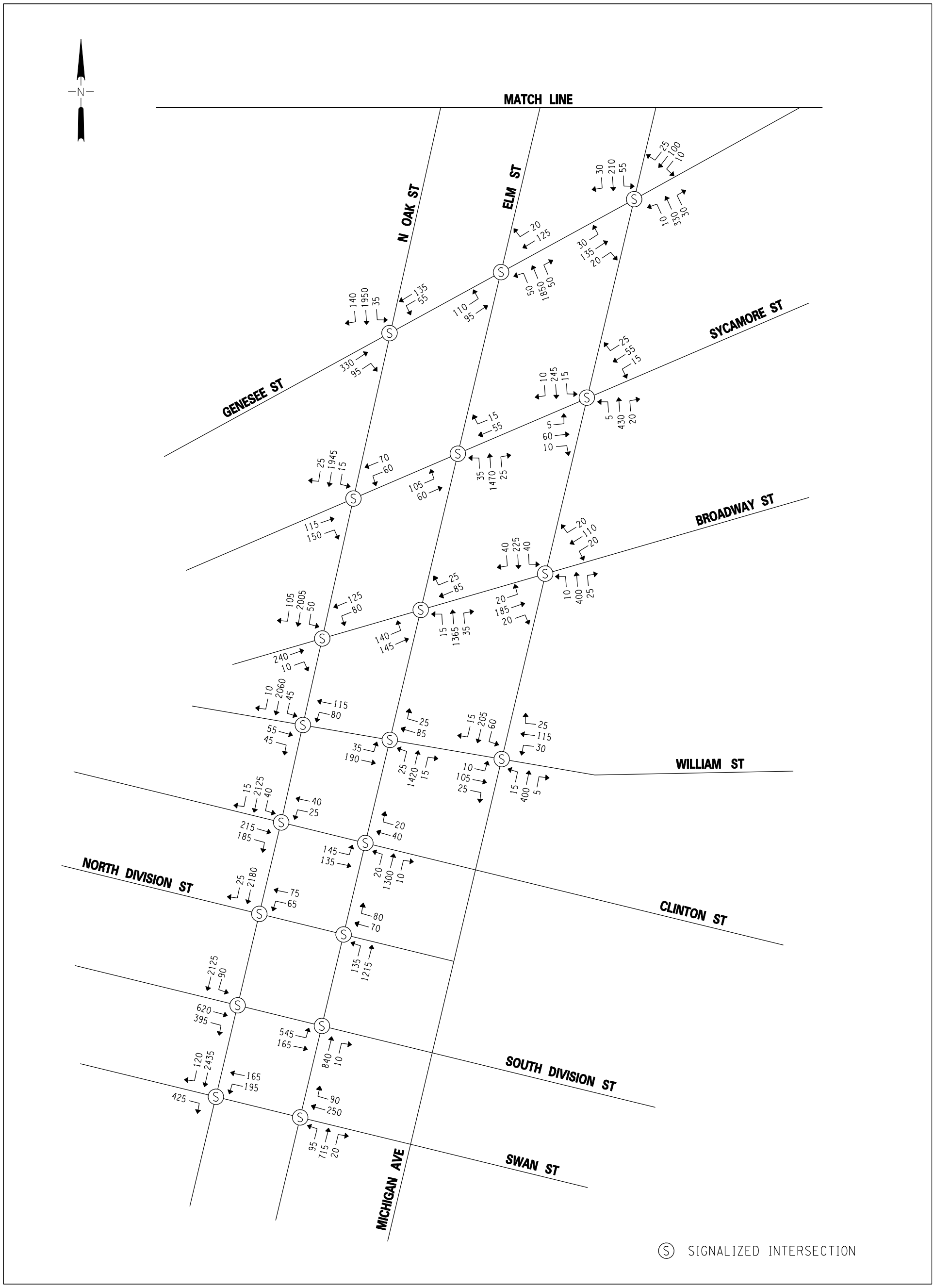
SCENARIO #1 (2013)
TOTAL TRIPS
PM PEAK HOUR

FIGURE 21

OCTOBER 2008

PAGE 1 OF 2

C&S COMPANIES



SCENARIO #1 (2013)
TOTAL TRIPS
PM PEAK HOUR

FIGURE 21

OCTOBER 2008

PAGE 2 OF 2

C&S COMPANIES

Appendix B

Study Intersection Descriptions

Study Intersection Descriptions

Signalized Intersections

Main Street/Best Street is a signalized, four-leg, four-approach intersection. The eastbound Summer Street and westbound Best Street approaches each consist of one shared left-turn/through/right-turn lane. The northbound and southbound Main Street approaches consist of one left-turn/through lane, one exclusive through lane, and one shared through/right-turn lane or one left-turn/through lane and one through/right-turn lane depending on the time of day. Sidewalks are provided on each side of the roadways, with crosswalks across all legs of the intersection.

The traffic signal operates in three phases: eastbound and westbound North Street, a protected left-turn for southbound Main Street, and northbound and southbound Main Street. The pedestrian phases are concurrent with the vehicular traffic and come up automatically each phase.

Main Street/North Street is a signalized, four-leg, four-approach intersection. The eastbound North Street and westbound East North Street approaches each consist of one shared left-turn/through/right-turn lane. The northbound and southbound Main Street approaches consist of one left-turn/through lane, one exclusive through lane, and one shared through/right-turn lane or one left-turn/through lane and one through/right-turn lane depending on the time of day. Sidewalks are provided on each side of the roadways, with crosswalks across all legs of the intersection.

The traffic signal operates in three phases: eastbound and westbound North Street, a protected left-turn for northbound Main Street, and northbound and southbound Main Street. The pedestrian phases are concurrent with the vehicular traffic and come up automatically each phase.

Main Street/High Street is a signalized, three-leg, three-approach intersection. The westbound High Street approach consists of one shared left-turn/right-turn lane. The northbound and southbound Main Street approaches consist of one left-turn/through lane, one exclusive through lane, and one shared through/right-turn lane or one left-turn/through lane and one through/right-turn lane depending on the time of day. A school driveway is located on the western side of the intersection. Sidewalks are provided on each side of the roadways, with crosswalks across all legs of the intersection.

The traffic signal operates in three phases: northbound and southbound Main Street, westbound High Street, and a protected left-turn phase for southbound Main Street. Countdown pedestrian signals are provided for all crosswalks. The pedestrian phases are concurrent with vehicular traffic and come up automatically with each phase.

Main Street/Allen Street is a signalized, three-leg, three-approach intersection. The eastbound Allen Street approach consists of one shared left-turn/right-turn lane. The northbound and southbound Main Street approaches consist of one left-turn/through lane, one exclusive through lane, and one shared through/right-turn lane or one left-turn/through lane and one through/right-turn lane depending on the time of day. Sidewalks are provided on each side of the roadways, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases. Pedestrians are controlled by three-section red-yellow-green indications.

Main Street/Virginia Street is a signalized, four-leg, four-approach intersection. The eastbound and westbound Virginia Street approaches consist of one shared left-turn/through/right-turn lane. The northbound and southbound Main Street approaches consist of one left-turn/through lane, one exclusive through lane, and one shared through/right-turn lane or one left-turn/through lane and one through/right-turn lane depending on the time of day. Sidewalks are provided on all sides of the intersection. Crosswalks are not visible.

The traffic signal operates in two phases. There are no pedestrian indications at this intersection.

Main Street/Goodell Street is a signalized, four-leg, three-approach intersection (Goodell Street is one-way westbound). The Goodell Street approach consists of one shared left-turn/through lane, two exclusive through lanes, and one right-turn lane. The northbound Main Street approach consists of one shared left-turn/through lane. The southbound Main Street consists of two soft right-turn lanes and one right-turn lane; right turns on red are not allowed on this approach. On the southwestern side of the intersection, Pearl Street provides access to eastbound Route 33 and West Tupper Street. Sidewalks are provided, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases. Countdown pedestrian signals are provided for all crosswalks. The pedestrian phases are concurrent with vehicular traffic and come up automatically with each phase.

Washington Street/Goodell Street is a signalized, four-leg, three-approach intersection (Goodell Street is one-way westbound). The Goodell Street approach consists of four lanes: one shared left-turn/through lane, two exclusive through lanes, and one shared through/right-turn lane. The northbound Washington Street approach consists of one left-turn/through lane, while the southbound Washington Street approach consists of one through lane and one right-turn lane. Sidewalks are provided on all sides of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases. Pedestrian signals are provided for all crosswalks.

Washington Street/Tupper Street is a signalized, four-leg, three-approach intersection (Tupper Street is one-way eastbound). The Tupper Street approach consists of three lanes: one shared left-turn/through lane, an exclusive through lane and one shared through/right-turn lane. The northbound and southbound Washington Street approaches consist of one exclusive lane for through traffic and one dedicated lane for traffic turning onto Tupper Street. Sidewalks are provided on all sides of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases. Pedestrian signals are provided for all crosswalks.

Ellicott Street/Best Street is a signalized, three-leg, three-approach intersection (Ellicott Street is one-way northbound). The eastbound and westbound Best Street approaches consist of one shared left-turn/through lane. The northbound Ellicott Street approach consists of one shared left-turn/through and one shared through/right-turn lane. Sidewalks are provided on all sides of the intersection. Crosswalks are not visible.

The traffic signal operates in two phases. The pedestrian phases are concurrent with vehicular traffic and come up automatically each phase.

Ellicott Street/High Street is a signalized, four-leg, three-approach intersection (Ellicott Street is one-way northbound). The eastbound High Street approach consists of one shared left-turn/through lane, while the westbound High Street approach consists of one shared through/right-turn lane. The northbound Ellicott Street approach consists of one shared left-turn/through and one shared through/right-turn lane. Sidewalks are provided on all sides of the intersection. Crosswalks are not visible.

The traffic signal operates in two phases. The pedestrian phases are concurrent with vehicular traffic and come up automatically each phase.

Ellicott Street/Goodell Street is a signalized, four-leg, two-approach intersection (both streets are one-way). The westbound Goodell Street approach consists of one shared left-turn/through lane, two exclusive through lanes, and one shared through/right-turn lane. The northbound Ellicott Street approach consists of one shared left-turn/through lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases. Countdown pedestrian signals are provided for all crosswalks. The pedestrian phases are concurrent with vehicular traffic and come up automatically with each phase.

Ellicott Street/Tupper Street is a signalized, four-leg, three-approach intersection (Tupper Street one-way). The eastbound Tupper Street approach consists of one shared left-turn/through lane, an exclusive through lane, and one shared

through/right-turn lane. The northbound Ellicott Street approach consists of one shared through/right-turn lane and dedicated right-turn lane. The southbound Ellicott Street approach consists of one shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Oak Street/Goodell Street is a signalized, four-leg, two-approach intersection (Goodell Street is one-way, Oak Street is one-way south of Goodell Street). The westbound Goodell Street approach consists of one shared left-turn/through lane, two exclusive through lanes, and one shared through/right-turn lane. The southbound Oak Street approach consists of one shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases. Countdown pedestrian signals are provided for all crosswalks. The pedestrian phases are concurrent with vehicular traffic and come up automatically with each phase.

Oak Street/Tupper Street is a signalized, four-leg, two-approach intersection (both streets are one-way). The eastbound Tupper Street approach consists of two exclusive through lanes and one shared through/right-turn lane. The southbound Oak Street approach consists of an exclusive through lane, a shared through/right-turn lane and a dedicated right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Oak Street/Genesee Street is a signalized, four-leg, three-approach intersection (Oak Street is one-way). The eastbound Genesee Street approach consists of an exclusive through lane and a shared through/right-turn lane. The westbound Genesee street approach consists of a shared left-turn/through lane and an exclusive through lane. The southbound Oak Street approach consists of a shared left-turn/through lane, two exclusive through lanes and a dedicated right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Oak Street/Sycamore Street is a signalized, four-leg, three-approach intersection (Oak Street is one-way). The eastbound East Huron Street approach consists of a shared through/right-turn lane and the westbound Sycamore Street approach consists of a shared left-turn/through lane. The southbound Oak Street approach consists of a shared left-turn/through lane, an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Oak Street/Broadway Street is a signalized, four-leg, three-approach intersection (Oak Street is one-way). The eastbound Broadway Street approach consists of an exclusive through lane and a shared through/right-turn lane and the westbound Broadway Street approach consists of a shared left-turn/through lane and an exclusive through lane. The southbound Oak Street approach consists of a shared left-turn/through lane, an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Oak Street/William Street is a signalized, four-leg, three-approach intersection (Oak Street is one-way). The eastbound William Street approach consists of an exclusive through lane and a shared through/right-turn lane and the westbound William Street approach consists of a shared left-turn/through lane and an exclusive through lane. The southbound Oak Street approach consists of a shared left-turn/through lane, an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Oak Street/Clinton Street is a signalized, four-leg, three-approach intersection (Oak Street is one-way). The eastbound Clinton Street approach consists of a shared through/right-turn lane and the westbound Clinton Street approach consists of a shared left-turn/through lane. The southbound Oak Street approach consists of a shared left-turn/through lane, an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Oak Street/North Division Street is a signalized, four-leg, two-approach intersection (both Oak Street and North Division Street are one-way roadways). The westbound North Division Street approach consists of a shared left-turn/through lane and two exclusive through lanes. The southbound Oak Street approach consists of two exclusive through lanes and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Oak Street/South Division Street is a signalized, four-leg, two-approach intersection (both Oak Street and South Division Street are one-way roadways). The eastbound South Division Street approach consists of three exclusive through lanes and a dedicated right-turn lane. The southbound Oak Street approach consists of a shared left-turn/through lane and three exclusive through lanes. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Oak Street/Swan Street is a signalized, four-leg, three-approach intersection (Oak Street is one-way). The eastbound Swan Street approach consists of two dedicated right-turn lanes. The westbound Swan Street approach consists of a dedicated left-turn lane and two exclusive through lanes. The southbound Oak Street approach consists of three exclusive through lanes and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Elm Street/Tupper Street is a signalized, four-leg, two-approach intersection (both streets are one-way). The eastbound Tupper Street approach consists of a shared left-turn/through lane and an exclusive through. The northbound Elm Street approach consists of an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on both sides of the north leg on Elm Street, the west side of the south leg and both sides of the west leg of Tupper Street. There is a crosswalk across the eastbound approach on Tupper Street.

The traffic signal operates in two phases and there are pedestrian indications.

Elm Street/Genesee Street is a signalized, four-leg, three-approach intersection (Elm Street is one-way). The eastbound Genesee Street approach consists of a shared left-turn/through lane and an exclusive through lane. The westbound Genesee street approach consists of an exclusive through lane and a shared through/right-turn lane. The northbound Elm Street approach consists of a shared left-turn/through lane, two exclusive through lanes and a dedicated right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Elm Street/Sycamore Street is a signalized, four-leg, three-approach intersection (Elm Street is one-way). The eastbound Sycamore Street approach consists of a shared left-turn/through lane and the westbound Sycamore Street approach consists of a shared through/right-turn lane. The northbound Elm Street approach consists of a shared left-turn/through lane, an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Elm Street/Broadway Street is a signalized, four-leg, three-approach intersection (Elm Street is one-way). The eastbound Broadway Street approach consists of a shared left-turn/through lane and an exclusive through lane and the westbound Broadway Street approach consists of an exclusive through lane and a shared through/right-turn lane. The northbound Elm Street approach consists of a shared left-turn/through lane, an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Elm Street/William Street is a signalized, four-leg, three-approach intersection (Elm Street is one-way). The eastbound William Street approach consists of a shared left-turn/through lane and an exclusive through lane and the westbound William Street approach consists of an exclusive through lane and a shared through/right-turn lane. The northbound Elm Street approach consists of a shared left-turn/through lane, an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Elm Street/Clinton Street is a signalized, four-leg, three-approach intersection (Elm Street is one-way). The eastbound Clinton Street approach consists of a shared left-turn/through lane and the westbound Clinton Street approach consists of a shared through/right-turn lane. The northbound Elm Street approach consists of a shared left-turn/through lane, an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Elm Street/North Division Street is a signalized, four-leg, two-approach intersection (both Elm Street and North Division Street are one-way roadways). The westbound North Division Street approach consists of a shared left-turn/through lane and an exclusive through lane. The northbound Elm Street approach consists of a shared left-turn/through lane and two exclusive through lanes. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Elm Street/South Division Street is a signalized, four-leg, two-approach intersection (both Elm Street and South Division Street are one-way roadways). The eastbound South Division Street approach consists of a dedicated left-turn lane, a shared left-turn/through lane and an exclusive through lane. The northbound Elm Street approach consists of two exclusive through lanes and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Elm Street/Swan Street is a signalized, four-leg, two-approach intersection (Elm Street is one-way). The westbound Swan Street approach consists of a shared left-turn/through lane. The northbound Elm Street approach consists of a dedicated left-turn lane, a shared left-turn/through lane, an exclusive through lane and a shared through/right-turn lane. Sidewalks are provided on all legs of the intersection, with crosswalks across all legs of the intersection.

The traffic signal operates in two phases and there are pedestrian indications.

Michigan Avenue/Best Street is a signalized, four-leg, four-approach intersection. The eastbound and westbound Best Street approaches consist of one shared left-turn/through/right-turn lane. The northbound Michigan Avenue approach consists of one shared left-turn/through lane and one exclusive right-turn lane. The southbound Michigan Avenue approach consists of one shared left-turn/through/right-turn lane. Sidewalks are provided on all sides of the intersection; crosswalks are available across all approaches.

The traffic signal operates in two phases and there are pedestrian indications.

Michigan Avenue/North Street is a signalized, four-leg, four-approach intersection. The eastbound and westbound North Street approaches consist of one shared left-turn/through/right-turn lane. The northbound Michigan Avenue approach consists of one shared left-turn/through lane and one exclusive right-turn lane. The southbound Michigan Avenue approach consists of one shared left-turn/through/right-turn lane. Sidewalks are provided on all sides of the intersection; crosswalks are available across all approaches.

The traffic signal operates in two phases. The study team observed loop detectors on the eastbound and westbound East North Street approaches. Countdown pedestrian signals are provided for all crosswalks. The pedestrian phases are concurrent with vehicular traffic; the north-south crossings come up automatically, but the east-west crossings come up only upon pushbutton actuation.

Michigan Avenue/High Street is a signalized, four-leg, four-approach intersection. The eastbound and westbound High Street approaches consist of one shared left-turn/through/right-turn lane. The northbound Michigan Avenue approach consists of

one shared left-turn/through/right turn lane, while the southbound Michigan Avenue approach consists of one shared left-turn/through lane and one exclusive through/right-turn lane. Sidewalks are provided on all sides of the intersection, with crosswalks across all approaches.

The traffic signal operates in two phases. The study team observed loop detectors on the eastbound and westbound High Street approaches. Countdown pedestrian signals are provided for all crosswalks. The pedestrian phases are concurrent with vehicular traffic; the north-south crossings come up automatically, but the east-west crossings come up only upon pushbutton actuation.

Michigan Avenue/Carlton Street is a signalized, four-leg, four-approach intersection. The eastbound and westbound Carlton Street approaches each consist of one shared left-turn/through/right-turn lane. The northbound and southbound Michigan Avenue approaches each consist of one shared left-turn/through/right-turn lane. Sidewalks are provided on all sides of the intersection, with crosswalks across all approaches.

The traffic signal operates in two phases. The study team observed loop detectors on the eastbound and westbound Carlton Street approaches. Countdown pedestrian signals are provided for all crosswalks. The pedestrian phases are concurrent with vehicular traffic; the north-south crossings come up automatically, but the east-west crossings come up only upon pushbutton actuation.

Michigan Avenue/Virginia Street is a signalized, four-leg, three-approach intersection. The Virginia Street eastbound approach consists of one shared left-turn/through/right-turn lane. Virginia Street becomes one-way eastbound just east of Michigan Avenue. The northbound and southbound Michigan Avenue approaches consist of one shared left-turn/through/right-turn lane. Sidewalks are provided on all sides of the intersection, with crosswalks across all approaches.

The traffic signal operates in two phases. Loop detectors were observed on the eastbound and westbound Virginia Street approaches. Countdown pedestrian signals are provided for all crosswalks. The pedestrian phases are concurrent with vehicular traffic; the north-south crossings come up automatically, but the east-west crossings come up only upon pushbutton actuation.

Michigan Avenue/Goodell Street is a signalized, four-leg, three-approach intersection (Goodell Street is one-way westbound). The Goodell Street approach consists of one shared left-turn/through lane, two exclusive through lanes, and one shared through/right-turn lane. The northbound Michigan Avenue approach consists of one left-turn and one through lane, while the southbound Michigan Avenue approach consists of one through lane and one shared through/right-turn lane. Sidewalks are provided on all sides of the intersection, with crosswalks across all approaches.

The traffic signal operates in three phases: westbound Goodell Street, a protected left-turn for northbound Michigan Avenue, and northbound and southbound Michigan Avenue. Loop detectors are present on all approaches. Countdown pedestrian signals are provided for all crosswalks. The pedestrian phases are concurrent with vehicular traffic and are pushbutton-actuated.

Michigan Avenue/Genesee Street is a signalized, four-leg, four-approach intersection. Each approach to the intersection consists of one shared left-turn/through lane and a shared through/right-turn lane. Sidewalks are provided on all sides of the intersection except for the west side of the north approach on Michigan Avenue, with crosswalks across all approaches.

The traffic signal operates in two phases with pedestrian indications.

Unsignalized Intersections

Main Street/Goodrich Street is an unsignalized, three-leg, three-approach intersection with a stop sign at the end of the westbound Goodrich Street approach. The Goodrich Street approach consists of one shared left-turn/right-turn lane. The northbound Main Street approach consists of one through lane and one shared through/right-turn lane, while the southbound Main Street approach consists of one shared left-turn/through and one through lane. Sidewalks are provided on all sides of the intersection, with a crosswalk across the Goodrich Street approach.

Main Street/Carlton Street is an unsignalized, three-leg, three-approach intersection with a stop sign at the end of the westbound Carlton Street approach. The Carlton Street approach consists of one shared left-turn/right-turn lane. The northbound Main Street approach consists of two through lanes and one shared through/right-turn lane during the AM and PM peak hours of the weekday, while at all other times the approach consists of one through lane and one shared through/right-turn lane. The southbound Main Street approach consists of one shared left-turn/through lane and two through lanes during the AM and PM peak hours of the weekday, while at all other times the approach consists of one shared left-turn/through lane and one through lane. Sidewalks are provided on all sides of the intersection, with a crosswalk across the Carlton Street approach.

Washington Street/High Street is an unsignalized, three-approach, three-leg intersection with a stop sign at the end of northbound Washington Street approach. The eastbound High Street approach consists of one shared through/right-turn lane. The westbound High Street approach consists of shared left-turn/through lane. The Washington Street approach consists of one shared left-turn/right-turn lane. Sidewalks are provided on all sides of the intersection. Crosswalks are not visible.

Washington Street/Carlton Street is an unsignalized, four-approach, four-leg intersection with all-way stop signs. The eastbound and westbound Carlton Street

approaches each consist of one shared left-turn/through/right-turn lane. The northbound Washington Street approach consists of one left-turn/through/right-turn lane. The southbound Washington Street approach consists of one shared left-turn/through lane and one shared through/right-turn lane. Sidewalks are provided on all sides of the intersection, with crosswalks across all approaches.

Ellicott Street/North Street is an unsignalized, four-leg, three-approach intersection (Ellicott Street is one-way northbound). There are stop signs at the end of all approaches. The eastbound North Street approach consists of one left-turn/through lane. The westbound North Street approach consists of one through/right-turn lane. The Ellicott Street approach consists of one left-turn/through lane and one through/right-turn lane. Sidewalks are provided on all sides of the intersection, with crosswalks across all approaches.

Ellicott Street/Goodrich Street is an unsignalized, four-leg, three-approach intersection (Ellicott Street is one-way northbound). There are stop signs at the end of all approaches. The eastbound Goodrich Street approach consists of one left-turn/through lane. The westbound Goodrich Street approach consists of one through/right-turn lane. The Ellicott Street approach consists of one left-turn/through lane and one through/right-turn lane. Sidewalks are provided on all sides of the intersection, with crosswalks across all approaches.

Ellicott Street/Carlton Street is an unsignalized, four-leg, three-approach intersection (Ellicott Street is one-way northbound). There are stop signs at the end of all approaches. The eastbound Carlton Street approach consists of one left-turn/through lane, while the westbound Carlton Street approach consists of one through/right-turn lane. The Ellicott Street approach consists of one left-turn/through lane and one through/right-turn lane. Sidewalks are provided on all sides of the intersection, with crosswalks across all approaches.

Ellicott Street/Virginia Street is an unsignalized, three-leg, two-approach intersection (Ellicott Street is one-way northbound). There is a stop sign at the end of the westbound Virginia Street approach, which consists of one right-turn lane. The northbound Ellicott Street approach consists of one through lane and one though/right-turn lane. Sidewalks are provided on all sides of the intersection. Crosswalks are not visible.

Ellicott Street/North Oak Street is an unsignalized, three-leg, two-approach intersection (Ellicott Street is one-way northbound). There is a stop sign at the end of the westbound North Oak Street approach, which consists of one right-turn lane. The northbound Ellicott Street approach consists of one through lane and one shared though/right-turn lane. Sidewalks are provided on all sides of the intersection.

Michigan Avenue/Goodrich Street is an unsignalized, three-leg, three-approach intersection with a stop sign at the end of the eastbound Goodrich Street approach. The Goodrich Street approach consists of one shared left-turn/right-turn lane. The

northbound Michigan Street approach consists of one left-turn/through lane. The southbound Michigan Street approach consists of one through/right-turn lane. Sidewalks are provided on all sides of the intersection. Crosswalks are not visible.

Elm Street/Virginia Street is an unsignalized, three-leg, three-approach intersection with a stop sign at the end of the southbound Elm Street approach. The eastbound Virginia Street approach consists of one left-turn/through lane, while the westbound Virginia Street approach consists of one through/right-turn lane. The Elm Street approach consists of one shared left-turn/right-turn lane. Sidewalks are provided on all sides of the intersection. A crosswalk is provided across the Elm Street approach.

Elm Street/Carlton Street is an unsignalized, three-leg, three-approach intersection with stop signs at the end of all approaches. The eastbound Carlton Street approach consists of one through/right-turn lane. The westbound Carlton Street approach consists of one left-turn/through lane. The northbound Elm Street approach consists of one left-turn/right-turn lane. A medical institute is located at the northern side of this intersection, where vehicles can enter and exit the driveway. Sidewalks are provided on all sides of the intersection. Crosswalks are provided across northbound Elm Street and eastbound Carlton Street.

Elm Street/Goodell Street is an unsignalized, three-leg, two-approach intersection with a stop sign at the end of the Elm Street approach. The westbound Goodell Street approach consists of four exclusive through lanes. The Elm Street approach consists of two dedicated left-turn lanes. Sidewalks are provided on all sides of the intersection. A crosswalk is provided across the Elm Street approach.

Michigan Avenue/Cherry Street is an unsignalized, three-leg, two-approach intersection with no stop signs. Cherry Street is one-way eastbound and eventually provides access to Route 33 eastbound at Jefferson Avenue. The northbound and southbound approaches on Michigan Avenue consist of one exclusive through lane and a shared lane for through movements and turns onto Cherry Street. There are sidewalks on both sides of Michigan Avenue but none on Cherry Street. There are no crosswalks at this intersection.

Appendix C

Traffic Count Data

Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41038
Counted By: M Bennert, M Hite
Weather: warm and sunny
Town: Buffalo

File Name : Best_St@Ellicott_St_2008
Site Code : 02472008
Start Date : 8/19/2008
Page No : 1

Groups Printed- AUTOS - TRUCKS & BUSES

	Ellicott St (one way) Southbound					Best St Westbound					Ellicott St (one way) Northbound					Best St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	39	2	0	41	3	40	0	0	43	84
07:15 AM	0	0	0	0	0	0	24	3	0	27	3	6	0	1	10	0	17	0	0	17	54
07:30 AM	0	0	0	0	0	0	34	2	0	36	4	8	1	3	16	1	29	0	0	30	82
07:45 AM	0	0	0	0	0	0	36	0	0	36	4	6	7	0	17	0	32	0	0	32	85
Total	0	0	0	0	0	0	94	5	0	99	11	59	10	4	84	4	118	0	0	122	305
08:00 AM	0	0	0	0	0	0	35	2	0	37	5	11	0	1	17	0	28	0	0	28	82
08:15 AM	0	0	0	0	0	0	23	9	0	32	3	9	2	2	16	3	37	0	0	40	88
08:30 AM	0	0	0	0	0	0	50	6	0	56	5	6	4	5	20	0	31	0	0	31	107
08:45 AM	0	0	0	0	0	0	28	8	0	36	13	13	2	4	32	1	27	0	0	28	96
Total	0	0	0	0	0	0	136	25	0	161	26	39	8	12	85	4	123	0	0	127	373
09:00 AM	0	0	0	0	0	0	28	7	0	35	11	5	3	1	20	2	29	0	0	31	86
09:15 AM	0	0	0	0	0	0	11	0	0	11	3	7	4	2	16	1	34	0	0	35	62
09:30 AM	0	0	0	0	0	0	32	0	0	32	4	8	4	3	19	0	29	0	0	29	80
09:45 AM	0	0	0	0	0	0	42	5	0	47	4	6	2	2	14	2	20	0	0	22	83
Total	0	0	0	0	0	0	113	12	0	125	22	26	13	8	69	5	112	0	0	117	311
BREAK																					
12:00 PM	0	0	0	0	0	0	45	19	0	64	5	15	2	1	23	0	24	0	0	24	111
12:15 PM	0	0	0	0	0	0	33	8	0	41	7	6	3	3	19	0	49	0	0	49	109
12:30 PM	0	0	0	0	0	0	28	5	0	33	9	4	5	1	19	0	34	0	0	34	86
12:45 PM	0	0	0	0	0	0	28	0	0	28	1	0	0	0	1	0	6	0	0	6	35
Total	0	0	0	0	0	0	134	32	0	166	22	25	10	5	62	0	113	0	0	113	341
01:00 PM	0	0	0	0	0	0	35	0	0	35	3	0	0	0	3	0	2	0	0	2	40
01:15 PM	0	0	0	0	0	0	14	0	0	14	3	1	0	0	4	0	10	0	0	10	28
01:30 PM	0	0	0	0	0	0	26	1	0	27	5	1	2	0	8	0	32	0	0	32	67
01:45 PM	0	0	0	0	0	0	33	8	0	41	6	14	3	1	24	5	44	0	0	49	114
Total	0	0	0	0	0	0	108	9	0	117	17	16	5	1	39	5	88	0	0	93	249
BREAK																					
03:00 PM	0	0	0	0	0	0	17	5	0	22	7	16	7	4	34	5	49	0	0	54	110
03:15 PM	0	0	0	0	0	0	47	16	0	63	3	5	4	4	16	3	35	0	0	38	117
03:30 PM	0	0	0	0	0	0	44	3	0	47	2	1	0	0	3	0	4	0	0	4	54
03:45 PM	0	0	0	0	0	0	19	4	0	23	7	21	6	4	38	1	49	0	0	50	111
Total	0	0	0	0	0	0	127	28	0	155	19	43	17	12	91	9	137	0	0	146	392
04:00 PM	0	0	0	0	0	0	28	11	0	39	12	20	9	3	44	3	70	0	0	73	156
04:15 PM	0	0	0	0	0	0	25	7	0	32	10	19	5	5	39	1	58	0	0	59	130
04:30 PM	0	0	0	0	0	0	23	4	0	27	16	14	12	3	45	5	61	0	0	66	138
04:45 PM	0	0	0	0	0	0	23	5	0	28	8	7	8	3	26	2	59	0	0	61	115
Total	0	0	0	0	0	0	99	27	0	126	46	60	34	14	154	11	248	0	0	259	539
05:00 PM	0	0	0	0	0	0	27	5	0	32	13	8	9	5	35	1	66	0	0	67	134
05:15 PM	0	0	0	0	0	0	24	7	0	31	11	20	3	2	36	5	53	0	0	58	125
05:30 PM	0	0	0	0	0	0	25	2	0	27	10	12	7	6	35	1	51	0	0	52	114
05:45 PM	0	0	0	0	0	0	55	1	0	56	10	6	1	2	19	1	27	0	0	28	103
Total	0	0	0	0	0	0	131	15	0	146	44	46	20	15	125	8	197	0	0	205	476
Grand Total	0	0	0	0	0	0	942	153	0	1095	207	314	117	71	709	46	1136	0	0	1182	2986
Apprch %	0.0	0.0	0.0	0.0		0.0	86.0	14.0	0.0		29.2	44.3	16.5	10.0		3.9	96.1	0.0	0.0		
Total %	0.0	0.0	0.0	0.0	0.0	0.0	31.5	5.1	0.0	36.7	6.9	10.5	3.9	2.4	23.7	1.5	38.0	0.0	0.0	39.6	

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Turning Movement Count

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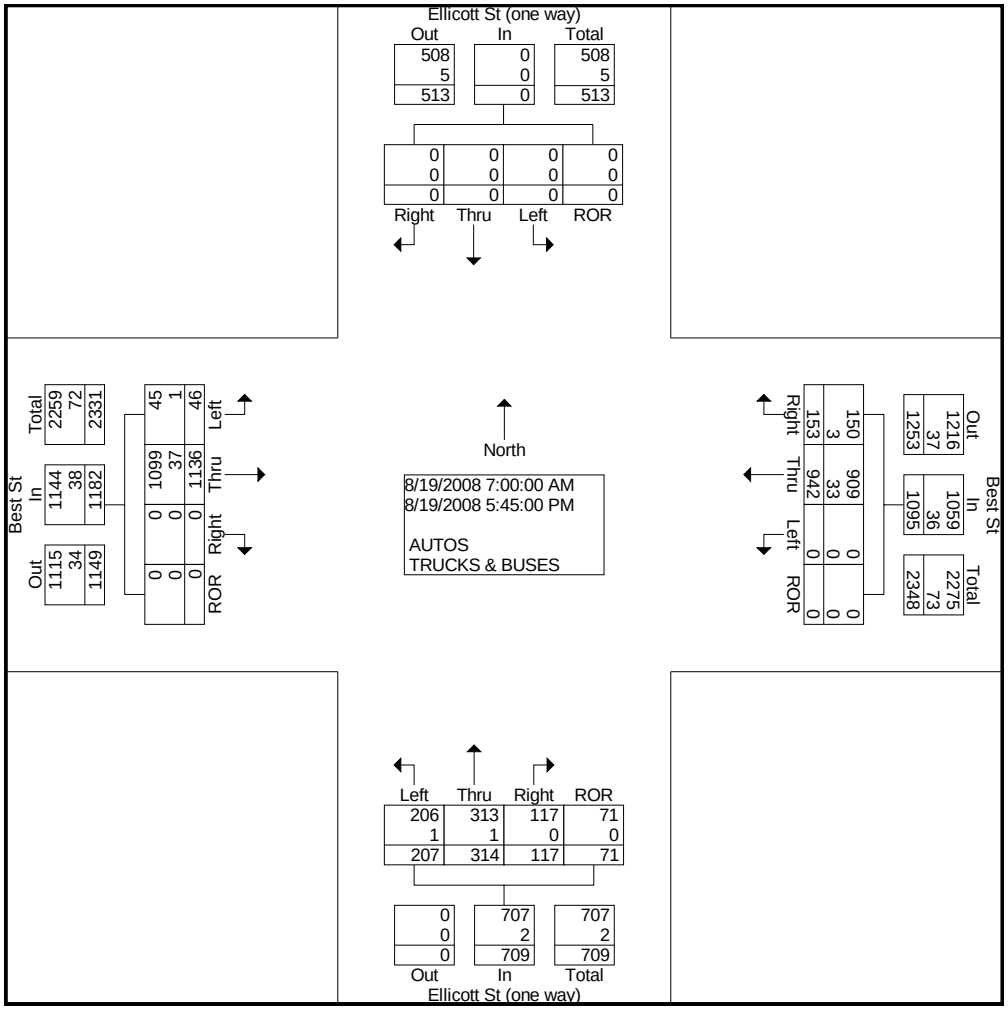
Town: Buffalo

File Name : Best_St@Ellicott_St_2008
Site Code : 02472008
Start Date : 8/19/2008
Page No : 2



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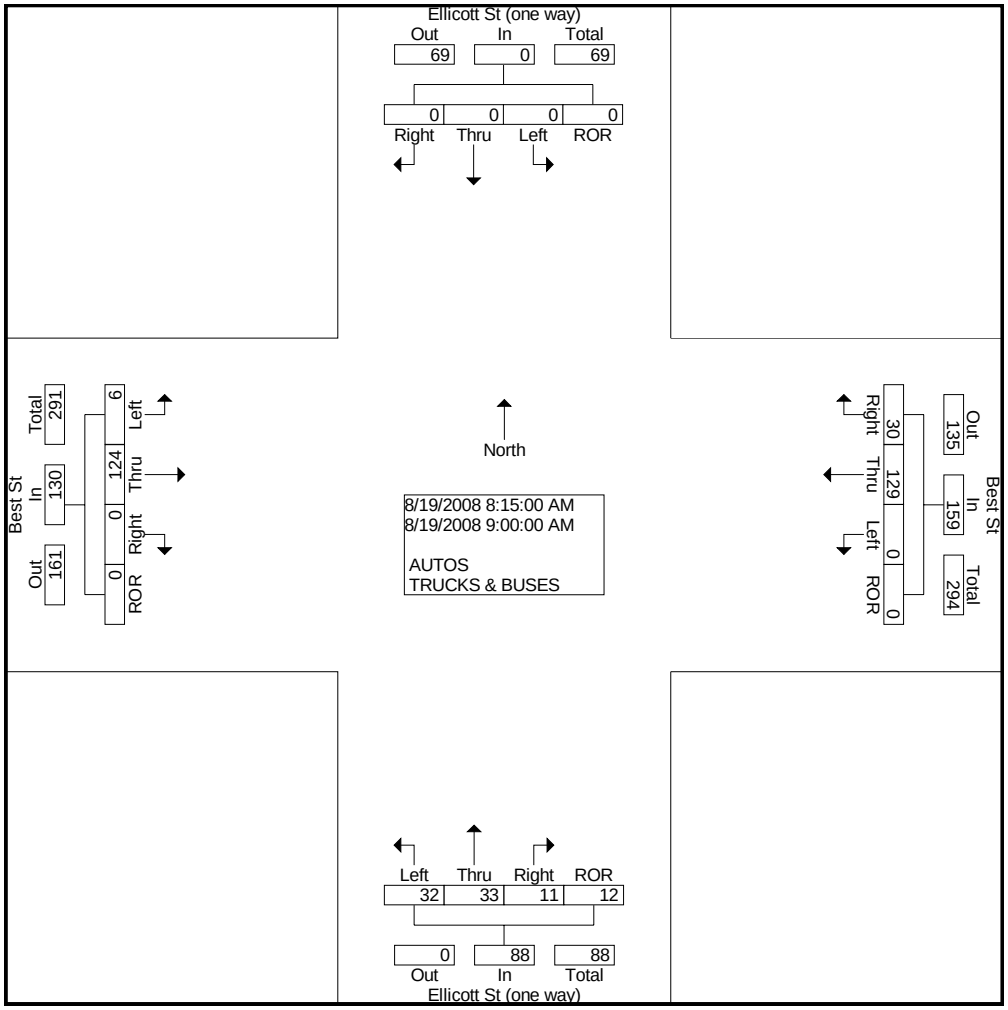
Town: Buffalo

File Name : Best_St@Ellicott_St_2008
Site Code : 02472008
Start Date : 8/19/2008
Page No : 3

	Ellicott St (one way) Southbound					Best St Westbound					Ellicott St (one way) Northbound					Best St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Intersection	08:15 AM																				
Volume	0	0	0	0	0	0	129	30	0	159	32	33	11	12	88	6	124	0	0	130	377
Percent	0.0	0.0	0.0	0.0		0.0	81.1	18.9	0.0		36.4	37.5	12.5	13.6		4.6	95.4	0.0	0.0		
08:30 Volume	0	0	0	0	0	0	50	6	0	56	5	6	4	5	20	0	31	0	0	31	107
Peak Factor																					0.881
High Int.	6:45:00 AM					08:30 AM					08:45 AM					08:15 AM					
Volume	0	0	0	0	0	0	50	6	0	56	13	13	2	4	32	3	37	0	0	40	
Peak Factor										0.710					0.688					0.813	

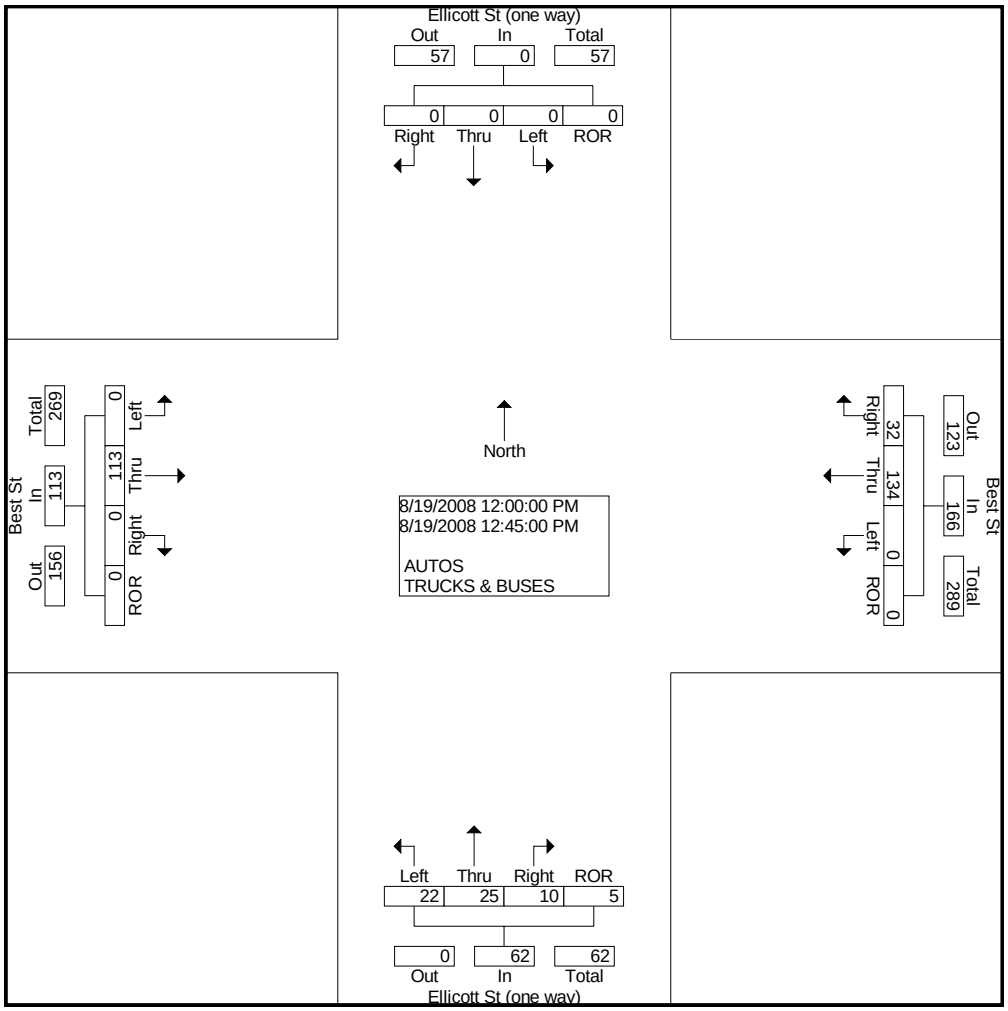


Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41038
Counted By: M Bennert, M Hite
Weather: warm and sunny
Town: Buffalo

File Name : Best_St@Ellicott_St_2008
Site Code : 02472008
Start Date : 8/19/2008
Page No : 4

	Ellicott St (one way) Southbound					Best St Westbound					Ellicott St (one way) Northbound					Best St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Peak Hour From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Intersection	12:00 PM																				
Volume	0	0	0	0	0	0	134	32	0	166	22	25	10	5	62	0	113	0	0	113	341
Percent	0.0	0.0	0.0	0.0		0.0	80.7	19.3	0.0		35.5	40.3	16.1	8.1		0.0	100.0	0.0	0.0		
12:00 Volume	0	0	0	0	0	0	45	19	0	64	5	15	2	1	23	0	24	0	0	24	111
Peak Factor																					0.768
High Int.						12:00 PM					12:00 PM					12:15 PM					
Volume	0	0	0	0	0	0	45	19	0	64	5	15	2	1	23	0	49	0	0	49	
Peak Factor										0.648					0.674					0.577	

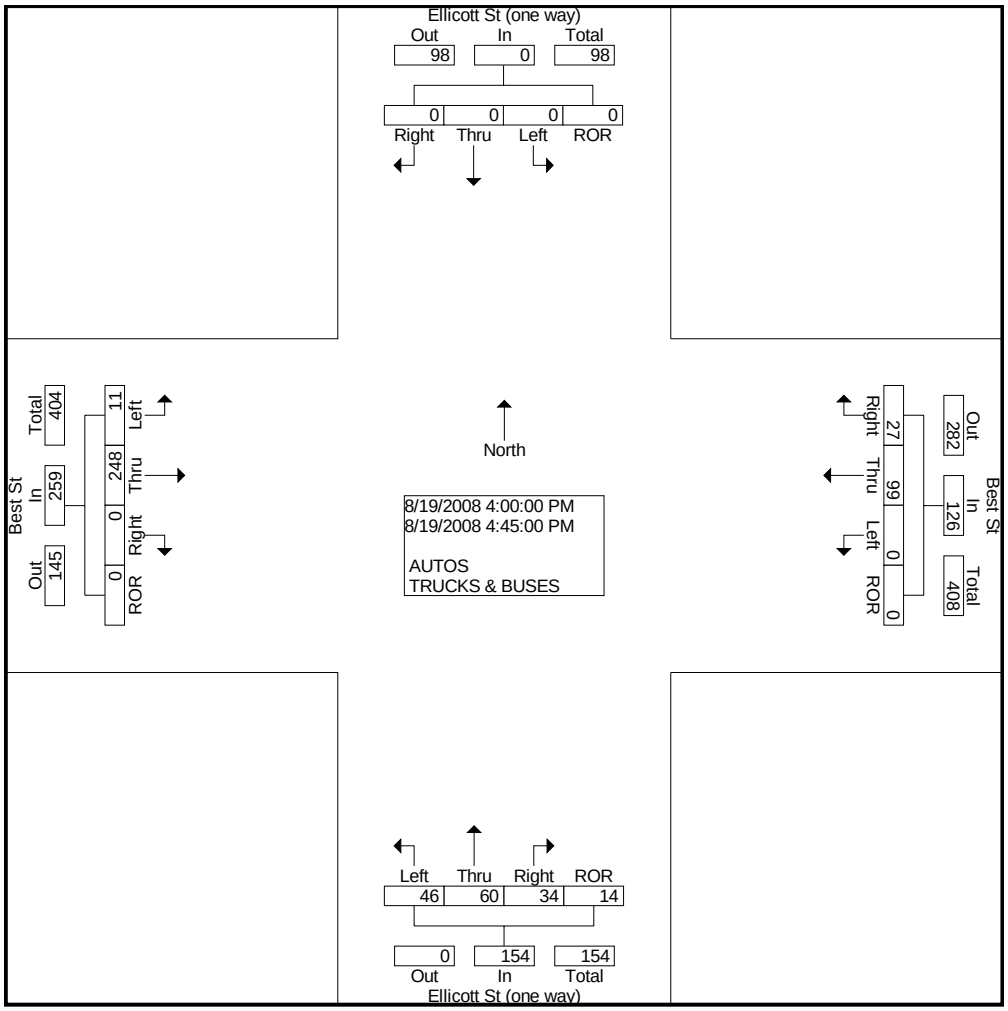


Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41038
Counted By: M Bennert, M Hite
Weather: warm and sunny
Town: Buffalo

File Name : Best_St@Ellicott_St_2008
Site Code : 02472008
Start Date : 8/19/2008
Page No : 5

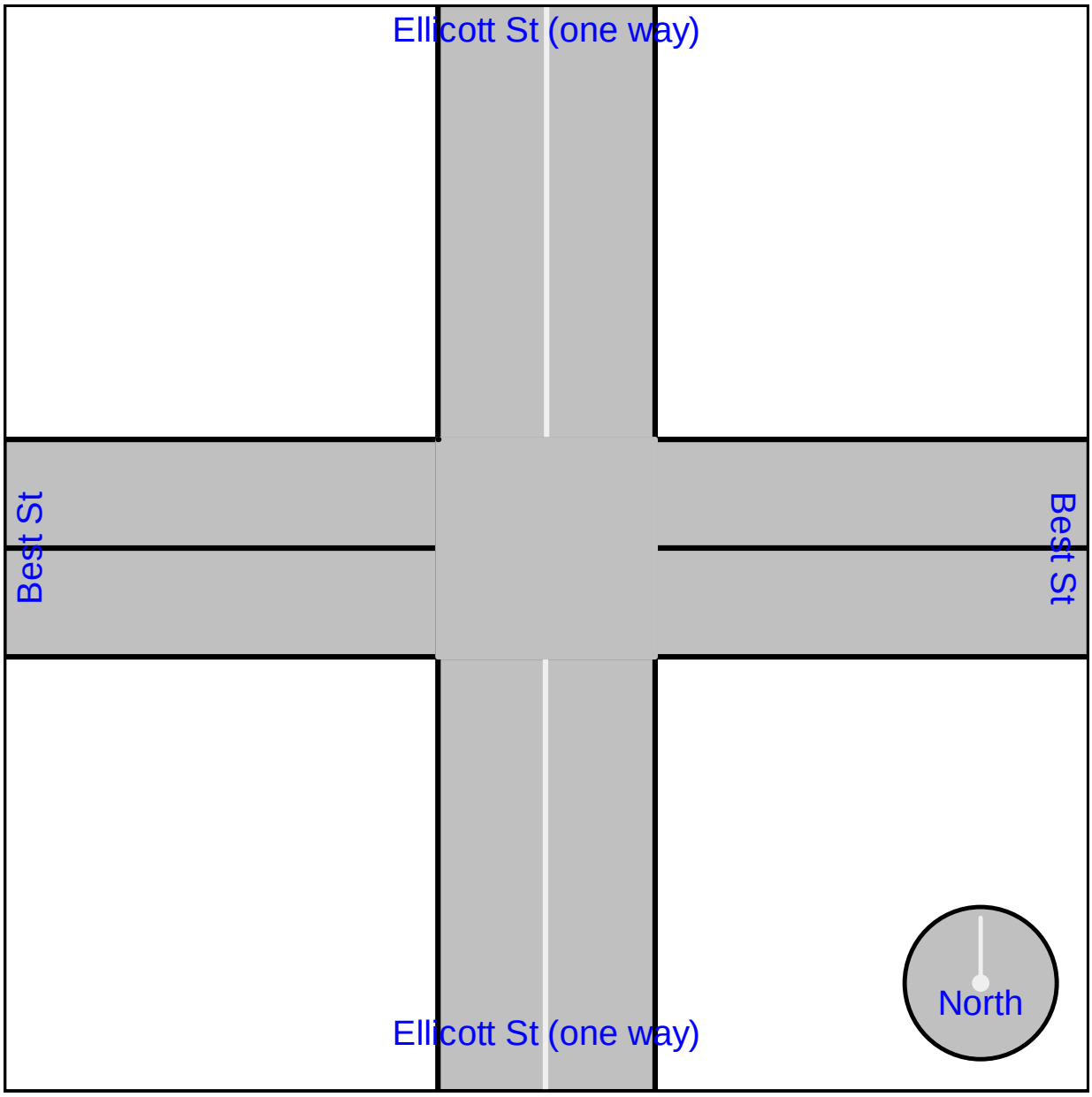
	Ellicott St (one way) Southbound					Best St Westbound					Ellicott St (one way) Northbound					Best St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	0	0	0	0	0	0	99	27	0	126	46	60	34	14	154	11	248	0	0	259	539
Percent	0.0	0.0	0.0	0.0		0.0	78.6	21.4	0.0		29.9	39.0	22.1	9.1		4.2	95.8	0.0	0.0		
04:00 Volume	0	0	0	0	0	0	28	11	0	39	12	20	9	3	44	3	70	0	0	73	156
Peak Factor																					0.864
High Int.						04:00 PM					04:30 PM					04:00 PM					
Volume	0	0	0	0	0	0	28	11	0	39	16	14	12	3	45	3	70	0	0	73	
Peak Factor										0.808					0.856					0.887	



Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41038
Counted By: M Bennert, M Hite
Weather: warm and sunny
Town: Buffalo

File Name : Best_St@Ellicott_St_2008
Site Code : 02472008
Start Date : 8/19/2008
Page No : 6



Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41752, D41038
Counted By: L Cunningham, M Hite
Weather: Warm and Sunny
Town: Buffalo

File Name : Main_St@Goodrich_St_2008
Site Code : 02482008
Start Date : 8/20/2008
Page No : 1

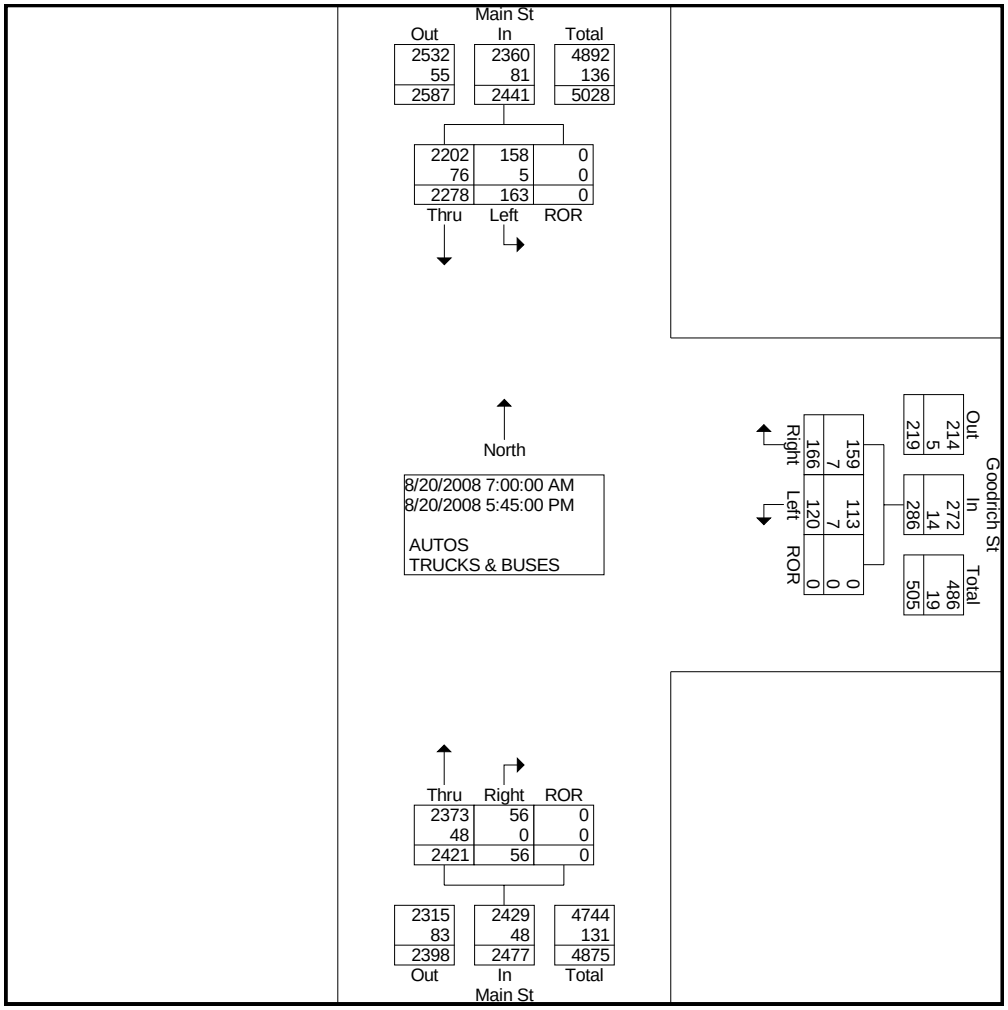
Groups Printed- AUTOS - TRUCKS & BUSES

	Main St Southbound					Goodrich St Westbound					Main St Northbound					Goodrich St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	5	20	0	0	25	7	0	13	0	20	0	51	2	0	53	0	0	0	0	0	98
07:15 AM	6	21	0	0	27	2	0	0	0	2	0	59	0	0	59	0	0	0	0	0	88
07:30 AM	10	12	0	0	22	1	0	5	0	6	0	54	0	0	54	0	0	0	0	0	82
07:45 AM	13	69	0	0	82	1	0	4	0	5	0	72	3	0	75	0	0	0	0	0	162
Total	34	122	0	0	156	11	0	22	0	33	0	236	5	0	241	0	0	0	0	0	430
08:00 AM	3	30	0	0	33	4	0	6	0	10	0	65	2	0	67	0	0	0	0	0	110
08:15 AM	5	62	0	0	67	3	0	4	0	7	0	61	5	0	66	0	0	0	0	0	140
08:30 AM	6	46	0	0	52	2	0	0	0	2	0	96	3	0	99	0	0	0	0	0	153
08:45 AM	6	52	0	0	58	3	0	4	0	7	0	73	1	0	74	0	0	0	0	0	139
Total	20	190	0	0	210	12	0	14	0	26	0	295	11	0	306	0	0	0	0	0	542
09:00 AM	1	15	0	0	16	0	0	0	0	0	0	86	2	0	88	0	0	0	0	0	104
09:15 AM	3	38	0	0	41	1	0	1	0	2	0	69	2	0	71	0	0	0	0	0	114
09:30 AM	7	77	0	0	84	4	0	1	0	5	0	71	3	0	74	0	0	0	0	0	163
09:45 AM	6	71	0	0	77	4	0	2	0	6	0	58	0	0	58	0	0	0	0	0	141
Total	17	201	0	0	218	9	0	4	0	13	0	284	7	0	291	0	0	0	0	0	522
BREAK																					
12:00 PM	7	86	0	0	93	4	0	4	0	8	0	30	2	0	32	0	0	0	0	0	133
12:15 PM	2	81	0	0	83	1	0	5	0	6	0	25	0	0	25	0	0	0	0	0	114
12:30 PM	4	60	0	0	64	1	0	2	0	3	0	29	2	0	31	0	0	0	0	0	98
12:45 PM	7	81	0	0	88	4	0	1	0	5	0	30	0	0	30	0	0	0	0	0	123
Total	20	308	0	0	328	10	0	12	0	22	0	114	4	0	118	0	0	0	0	0	468
01:00 PM	1	101	0	0	102	0	0	2	0	2	0	59	4	0	63	0	0	0	0	0	167
01:15 PM	6	65	0	0	71	4	0	1	0	5	0	102	0	0	102	0	0	0	0	0	178
01:30 PM	1	73	0	0	74	1	0	4	0	5	0	32	2	0	34	0	0	0	0	0	113
01:45 PM	7	80	0	0	87	3	0	5	0	8	0	8	0	0	8	0	0	0	0	0	103
Total	15	319	0	0	334	8	0	12	0	20	0	201	6	0	207	0	0	0	0	0	561
BREAK																					
03:00 PM	5	103	0	0	108	5	0	17	0	22	0	124	1	0	125	0	0	0	0	0	255
03:15 PM	9	115	0	0	124	2	0	6	0	8	0	106	3	0	109	0	0	0	0	0	241
03:30 PM	4	80	0	0	84	8	0	5	0	13	0	100	1	0	101	0	0	0	0	0	198
03:45 PM	4	103	0	0	107	1	0	8	0	9	0	107	2	0	109	0	0	0	0	0	225
Total	22	401	0	0	423	16	0	36	0	52	0	437	7	0	444	0	0	0	0	0	919
04:00 PM	3	93	0	0	96	6	0	7	0	13	0	112	3	0	115	0	0	0	0	0	224
04:15 PM	5	110	0	0	115	7	0	8	0	15	0	107	1	0	108	0	0	0	0	0	238
04:30 PM	2	99	0	0	101	11	0	13	0	24	0	96	3	0	99	0	0	0	0	0	224
04:45 PM	2	98	0	0	100	6	0	6	0	12	0	110	3	0	113	0	0	0	0	0	225
Total	12	400	0	0	412	30	0	34	0	64	0	425	10	0	435	0	0	0	0	0	911
05:00 PM	7	114	0	0	121	9	0	7	0	16	0	50	1	0	51	0	0	0	0	0	188
05:15 PM	7	74	0	0	81	4	0	9	0	13	0	151	1	0	152	0	0	0	0	0	246
05:30 PM	2	77	0	0	79	6	0	7	0	13	0	121	4	0	125	0	0	0	0	0	217
05:45 PM	7	72	0	0	79	5	0	9	0	14	0	107	0	0	107	0	0	0	0	0	200
Total	23	337	0	0	360	24	0	32	0	56	0	429	6	0	435	0	0	0	0	0	851
Grand Total	163	2278	0	0	2441	120	0	166	0	286	0	2421	56	0	2477	0	0	0	0	0	5204
Apprch %	6.7	93.3	0.0	0.0		42.0	0.0	58.0	0.0		0.0	97.7	2.3	0.0		0.0	0.0	0.0	0.0		
Total %	3.1	43.8	0.0	0.0	46.9	2.3	0.0	3.2	0.0	5.5	0.0	46.5	1.1	0.0	47.6	0.0	0.0	0.0	0.0	0.0	

Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41752, D41038
Counted By: L Cunningham, M Hite
Weather: Warm and Sunny
Town: Buffalo

File Name : Main_St@Goodrich_St_2008
Site Code : 02482008
Start Date : 8/20/2008
Page No : 2

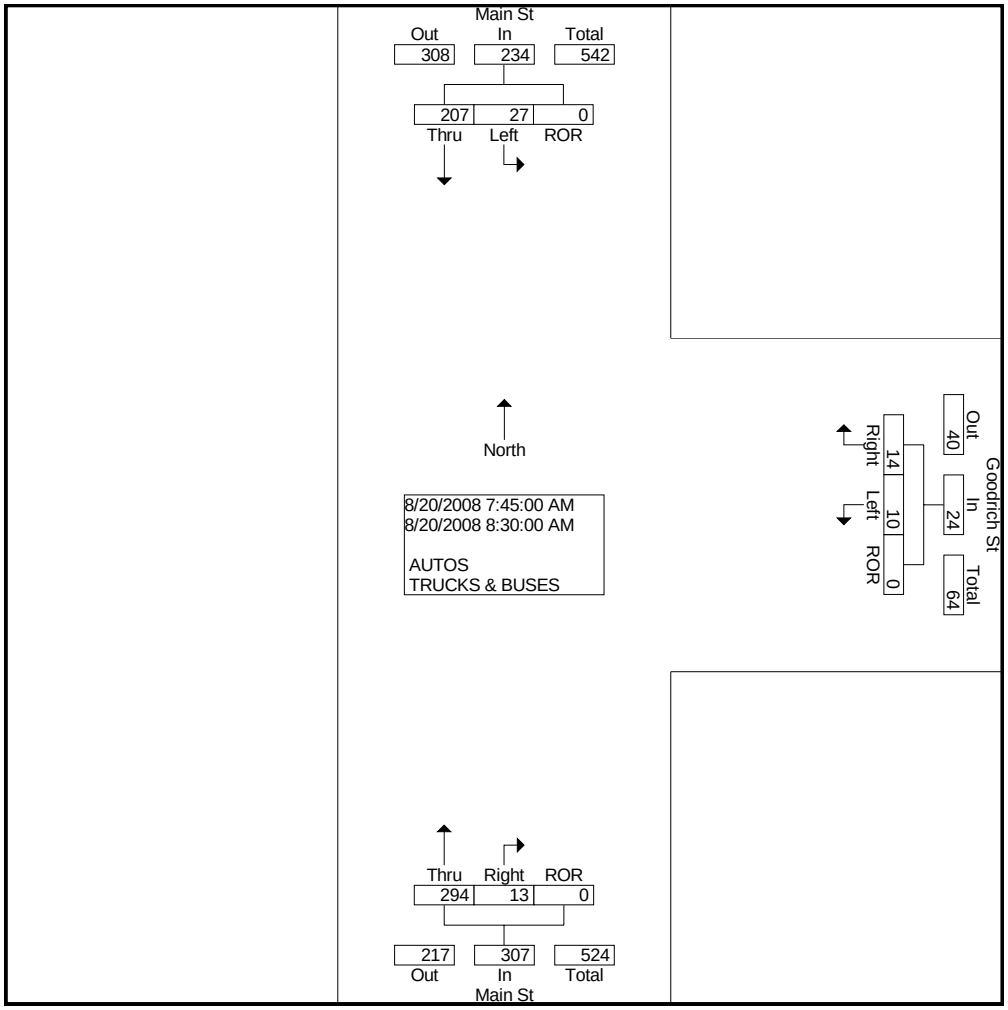


Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41752, D41038
Counted By: L Cunningham, M Hite
Weather: Warm and Sunny
Town: Buffalo

File Name : Main_St@Goodrich_St_2008
Site Code : 02482008
Start Date : 8/20/2008
Page No : 3

	Main St Southbound					Goodrich St Westbound					Main St Northbound					Goodrich St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	27	207	0	0	234	10	0	14	0	24	0	294	13	0	307	0	0	0	0	0	565
Percent	11.5	88.5	0.0	0.0		41.7	0.0	58.3	0.0		0.0	95.8	4.2	0.0		0.0	0.0	0.0	0.0		
07:45 Volume	13	69	0	0	82	1	0	4	0	5	0	72	3	0	75	0	0	0	0	0	162
Peak Factor																					0.872
High Int.	07:45 AM					08:00 AM					08:30 AM					6:45:00 AM					
Volume	13	69	0	0	82	4	0	6	0	10	0	96	3	0	99						
Peak Factor					0.713					0.600					0.775						

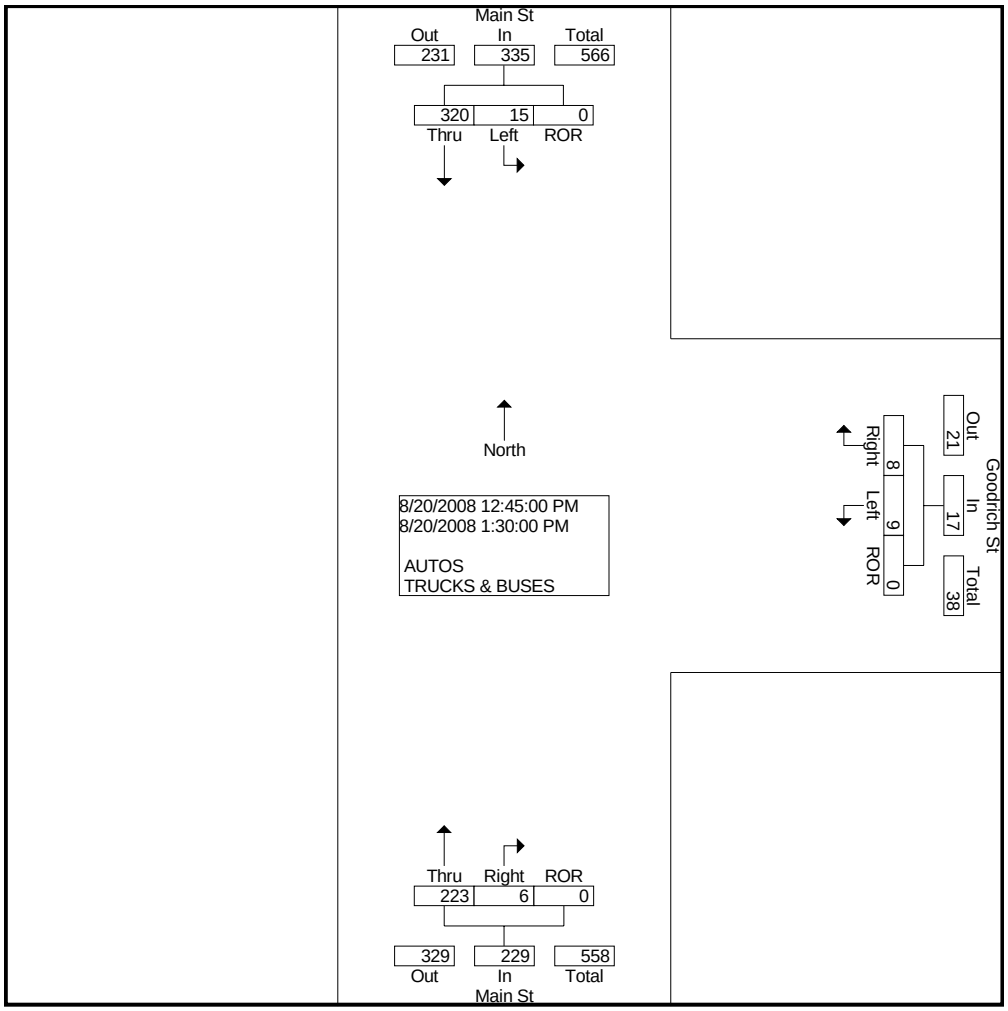


Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41752, D41038
Counted By: L Cunningham, M Hite
Weather: Warm and Sunny
Town: Buffalo

File Name : Main_St@Goodrich_St_2008
Site Code : 02482008
Start Date : 8/20/2008
Page No : 4

	Main St Southbound					Goodrich St Westbound					Main St Northbound					Goodrich St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Peak Hour From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Intersection	12:45 PM																				
Volume	15	320	0	0	335	9	0	8	0	17	0	223	6	0	229	0	0	0	0	0	581
Percent	4.5	95.5	0.0	0.0		52.9	0.0	47.1	0.0		0.0	97.4	2.6	0.0		0.0	0.0	0.0	0.0		
01:15 Volume	6	65	0	0	71	4	0	1	0	5	0	102	0	0	102	0	0	0	0	0	178
Peak Factor																					0.816
High Int.	01:00 PM					12:45 PM					01:15 PM										
Volume	1	101	0	0	102	4	0	1	0	5	0	102	0	0	102						
Peak Factor					0.821					0.850					0.561						

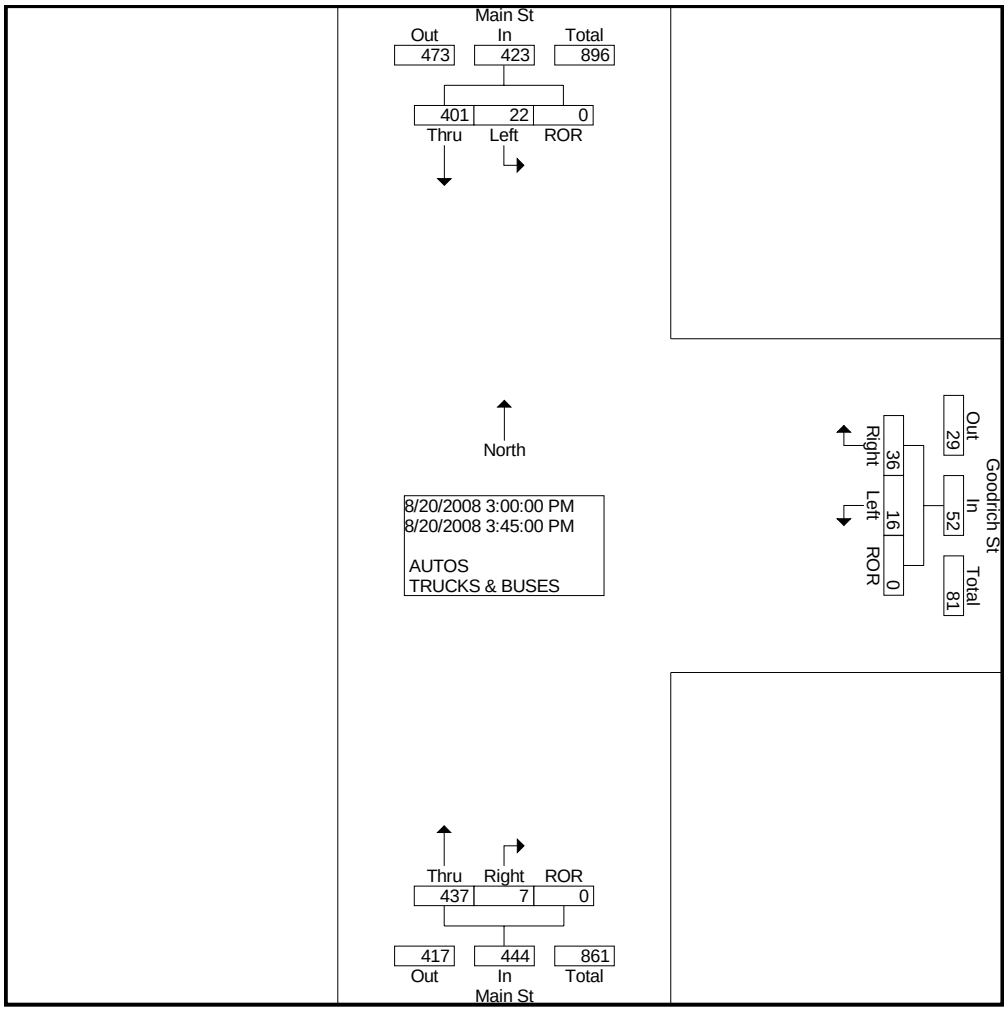


Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41752, D41038
Counted By: L Cunningham, M Hite
Weather: Warm and Sunny
Town: Buffalo

File Name : Main_St@Goodrich_St_2008
Site Code : 02482008
Start Date : 8/20/2008
Page No : 5

	Main St Southbound					Goodrich St Westbound					Main St Northbound					Goodrich St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	03:00 PM																				
Volume	22	401	0	0	423	16	0	36	0	52	0	437	7	0	444	0	0	0	0	0	919
Percent	5.2	94.8	0.0	0.0		30.8	0.0	69.2	0.0		0.0	98.4	1.6	0.0		0.0	0.0	0.0	0.0		
03:00 Volume	5	103	0	0	108	5	0	17	0	22	0	124	1	0	125	0	0	0	0	0	255
Peak Factor																					0.901
High Int.	03:15 PM					03:00 PM					03:00 PM										
Volume	9	115	0	0	124	5	0	17	0	22	0	124	1	0	125						
Peak Factor					0.853					0.591					0.888						



Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41752, D41038
Counted By: L Cunningham, M Hite
Weather: Warm and Sunny
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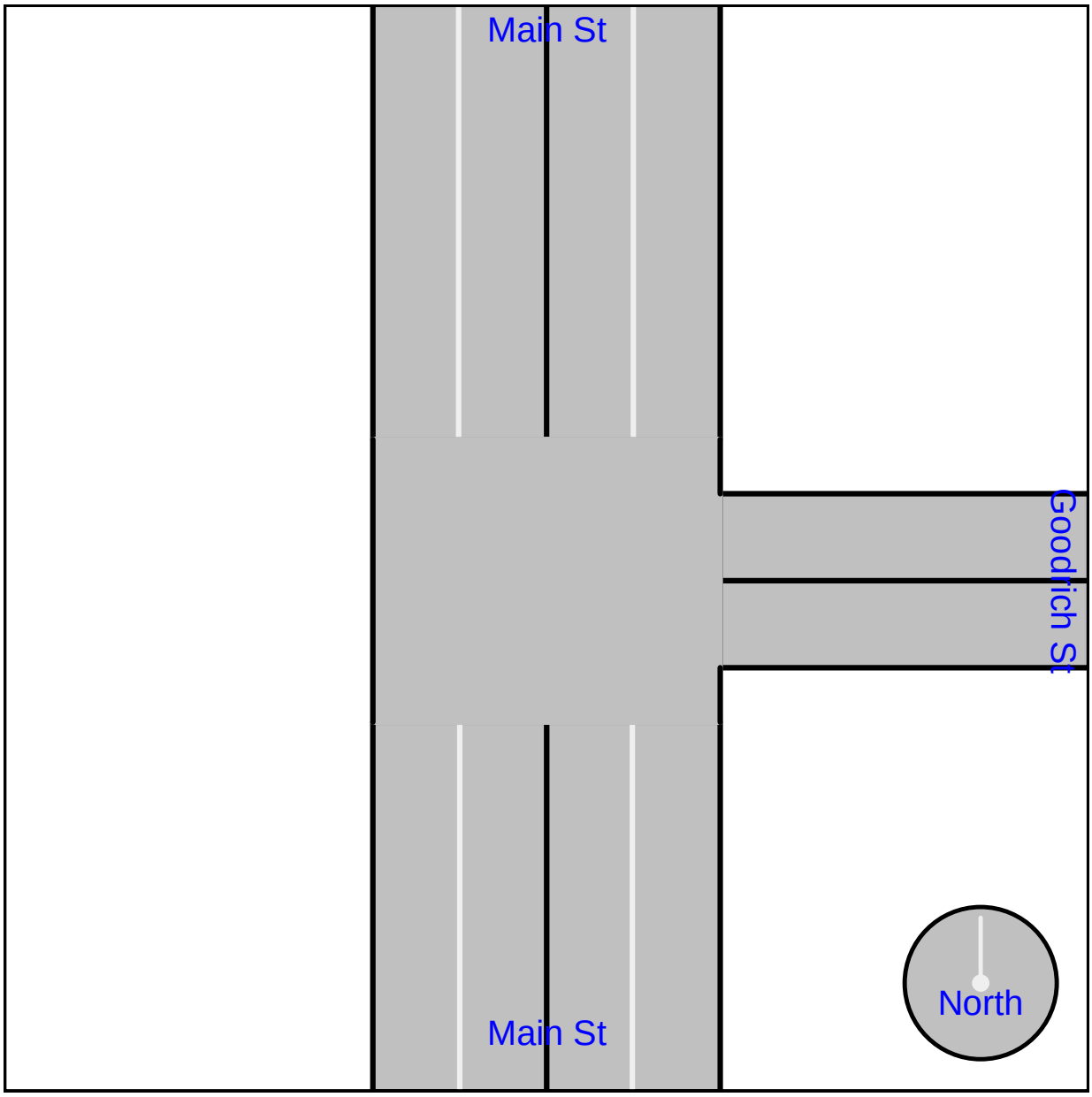
File Name : Main_St@Goodrich_St_2008
Site Code : 02482008
Start Date : 8/20/2008
Page No : 6



Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41752
Counted By: M Hite, L Cunningham
Weather: Hot and Sunny
Town: Buffalo

File Name : Main_St@Virginia_St_2008
Site Code : 02492008
Start Date : 8/21/2008
Page No : 1

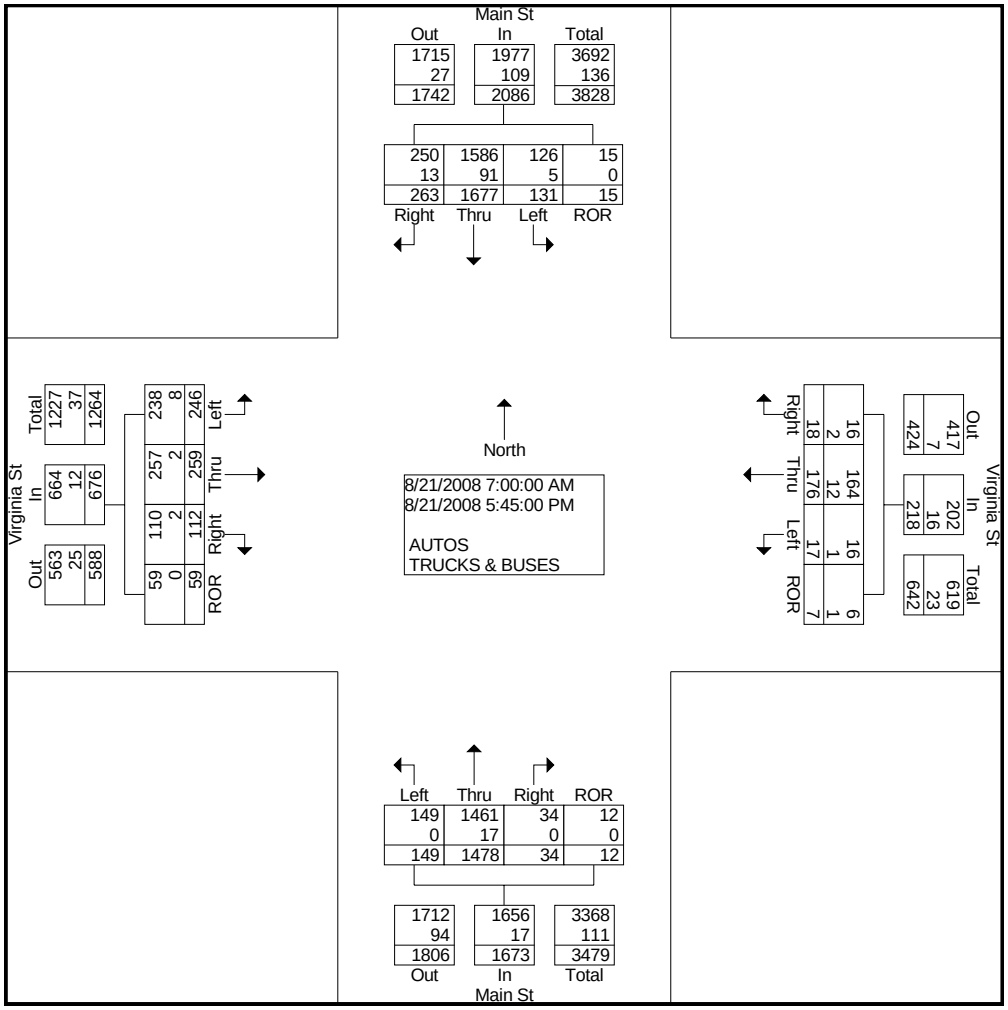
Groups Printed- AUTOS - TRUCKS & BUSES

	Main St Southbound					Virginia St Westbound					Main St Northbound					Virginia St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	6	15	0	0	21	0	0	0	0	0	0	40	1	0	41	1	11	2	0	14	76
07:15 AM	3	40	1	3	47	1	2	0	0	3	0	47	1	0	48	1	4	0	0	5	103
07:30 AM	3	54	2	0	59	0	3	2	0	5	6	29	1	0	36	7	6	0	1	14	114
07:45 AM	4	45	8	0	57	0	6	0	0	6	7	37	0	0	44	7	4	4	4	19	126
Total	16	154	11	3	184	1	11	2	0	14	13	153	3	0	169	16	25	6	5	52	419
08:00 AM	1	51	10	1	63	0	2	0	0	2	7	40	0	0	47	10	9	6	0	25	137
08:15 AM	2	79	10	3	94	0	3	0	0	3	2	51	1	0	54	4	6	1	1	12	163
08:30 AM	2	57	14	0	73	2	2	0	0	4	0	49	0	0	49	8	8	2	0	18	144
08:45 AM	4	47	5	2	58	0	2	1	0	3	0	60	1	0	61	4	12	5	1	22	144
Total	9	234	39	6	288	2	9	1	0	12	9	200	2	0	211	26	35	14	2	77	588
09:00 AM	1	51	8	0	60	0	1	0	0	1	0	44	0	0	44	3	9	2	0	14	119
09:15 AM	4	45	6	0	55	0	6	1	0	7	0	32	0	0	32	1	2	2	0	5	99
09:30 AM	2	38	4	0	44	0	1	0	0	1	0	62	0	0	62	4	9	1	0	14	121
09:45 AM	0	40	5	0	45	0	2	2	1	5	1	70	0	0	71	7	6	1	1	15	136
Total	7	174	23	0	204	0	10	3	1	14	1	208	0	0	209	15	26	6	1	48	475
BREAK																					
12:00 PM	8	54	15	1	78	1	12	1	1	15	2	48	2	0	52	11	9	3	3	26	171
12:15 PM	7	38	10	0	55	1	6	2	0	9	5	50	2	0	57	8	8	0	3	19	140
12:30 PM	2	61	9	0	72	1	4	0	1	6	4	32	0	1	37	14	11	7	3	35	150
12:45 PM	2	89	11	0	102	2	9	0	0	11	5	41	0	0	46	11	14	3	2	30	189
Total	19	242	45	1	307	5	31	3	2	41	16	171	4	1	192	44	42	13	11	110	650
01:00 PM	4	64	9	1	78	0	3	0	0	3	12	49	0	0	61	8	4	9	4	25	167
01:15 PM	4	56	2	0	62	0	5	0	0	5	3	46	2	0	51	13	7	4	3	27	145
01:30 PM	5	60	8	0	73	2	9	0	0	11	5	41	2	1	49	8	11	7	1	27	160
01:45 PM	8	49	14	0	71	0	2	1	0	3	4	42	0	1	47	8	4	4	0	16	137
Total	21	229	33	1	284	2	19	1	0	22	24	178	4	2	208	37	26	24	8	95	609
BREAK																					
03:00 PM	2	40	5	0	47	1	8	0	0	9	0	0	0	0	0	0	0	0	0	0	56
03:15 PM	4	33	6	0	43	0	3	0	2	5	4	47	0	0	51	6	10	3	0	19	118
03:30 PM	3	54	8	1	66	0	4	0	1	5	7	40	1	2	50	6	8	6	2	22	143
03:45 PM	3	65	6	0	74	0	11	1	1	13	9	46	2	0	57	12	3	4	2	21	165
Total	12	192	25	1	230	1	26	1	4	32	20	133	3	2	158	24	21	13	4	62	482
04:00 PM	1	49	7	1	58	0	17	0	0	17	8	45	0	1	54	14	11	8	2	35	164
04:15 PM	3	86	6	0	95	3	5	1	0	9	6	60	2	0	68	5	9	3	11	28	200
04:30 PM	2	80	9	0	91	0	10	0	0	10	4	51	10	6	71	12	8	5	7	32	204
04:45 PM	16	75	19	1	111	3	11	1	0	15	15	60	2	0	77	13	19	3	3	38	241
Total	22	290	41	2	355	6	43	2	0	51	33	216	14	7	270	44	47	19	23	133	809
05:00 PM	16	62	14	0	92	0	10	2	0	12	13	47	1	0	61	12	12	7	2	33	198
05:15 PM	5	34	12	0	51	0	9	1	0	10	7	66	1	0	74	8	7	8	2	25	160
05:30 PM	1	26	6	1	34	0	5	1	0	6	6	44	2	0	52	13	10	1	1	25	117
05:45 PM	3	40	14	0	57	0	3	1	0	4	7	62	0	0	69	7	8	1	0	16	146
Total	25	162	46	1	234	0	27	5	0	32	33	219	4	0	256	40	37	17	5	99	621
Grand Total	131	1677	263	15	2086	17	176	18	7	218	149	1478	34	12	1673	246	259	112	59	676	4653
Apprch %	6.3	80.4	12.6	0.7		7.8	80.7	8.3	3.2		8.9	88.3	2.0	0.7		36.4	38.3	16.6	8.7		
Total %	2.8	36.0	5.7	0.3	44.8	0.4	3.8	0.4	0.2	4.7	3.2	31.8	0.7	0.3	36.0	5.3	5.6	2.4	1.3	14.5	

Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41752
Counted By: M Hite, L Cunningham
Weather: Hot and Sunny
Town: Buffalo

File Name : Main_St@Virginia_St_2008
Site Code : 02492008
Start Date : 8/21/2008
Page No : 2

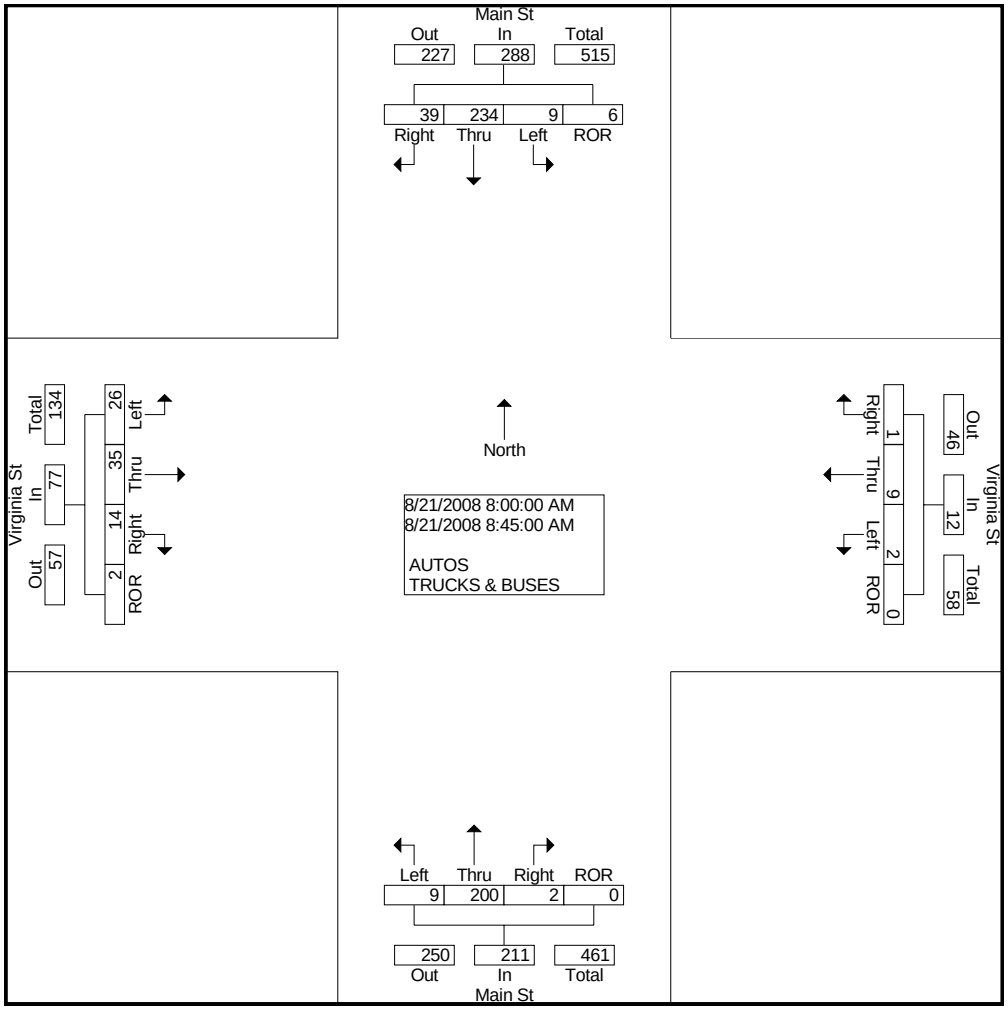


Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41752
Counted By: M Hite, L Cunningham
Weather: Hot and Sunny
Town: Buffalo

File Name : Main_St@Virginia_St_2008
Site Code : 02492008
Start Date : 8/21/2008
Page No : 3

	Main St Southbound					Virginia St Westbound					Main St Northbound					Virginia St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Peak Hour From 07:00 AM to 09:45 AM - Peak 1 of 1																					
Intersection	08:00 AM																				
Volume	9	234	39	6	288	2	9	1	0	12	9	200	2	0	211	26	35	14	2	77	588
Percent	3.1	81.3	13.5	2.1		16.7	75.0	8.3	0.0		4.3	94.8	0.9	0.0		33.8	45.5	18.2	2.6		
08:15 Volume	2	79	10	3	94	0	3	0	0	3	2	51	1	0	54	4	6	1	1	12	163
Peak Factor																					0.902
High Int.	08:15 AM					08:30 AM					08:45 AM					08:00 AM					
Volume	2	79	10	3	94	2	2	0	0	4	0	60	1	0	61	10	9	6	0	25	
Peak Factor					0.766					0.750					0.865					0.770	

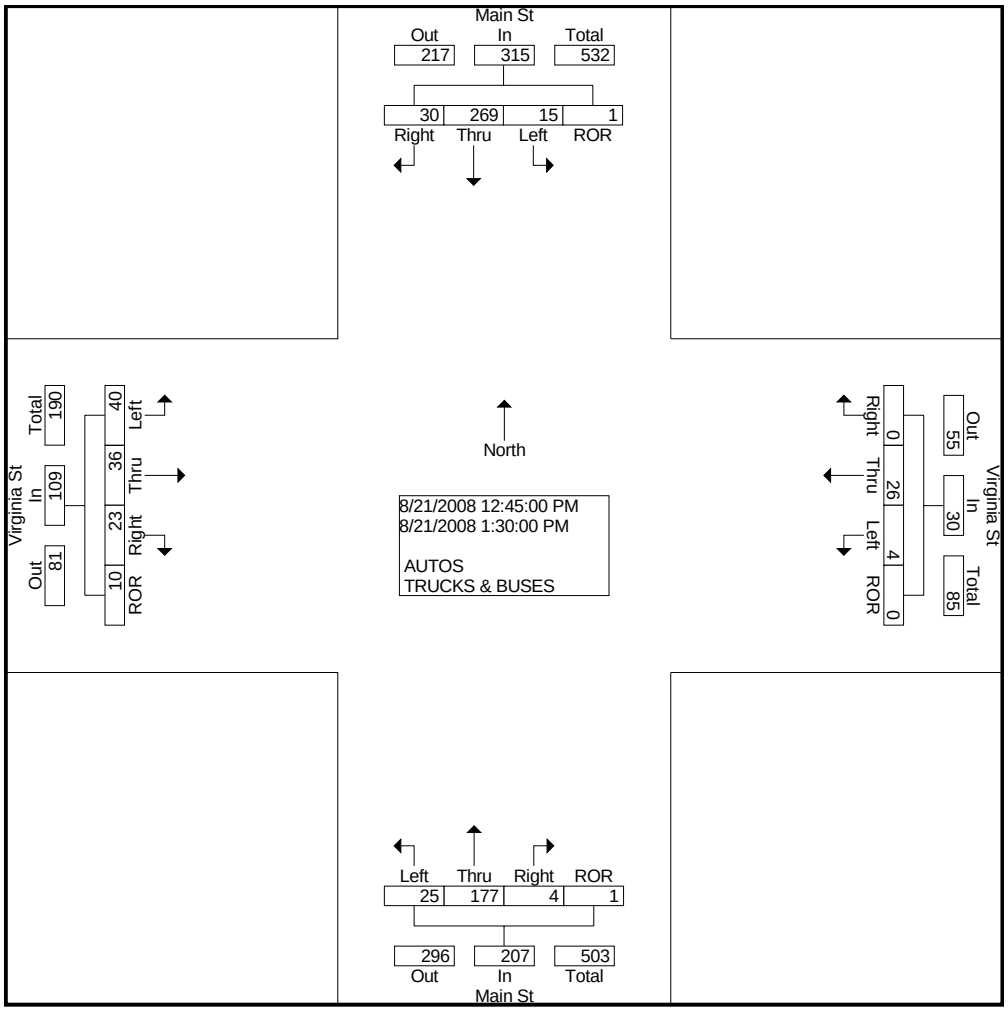


Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41752
Counted By: M Hite, L Cunningham
Weather: Hot and Sunny
Town: Buffalo

File Name : Main_St@Virginia_St_2008
Site Code : 02492008
Start Date : 8/21/2008
Page No : 4

	Main St Southbound					Virginia St Westbound					Main St Northbound					Virginia St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Peak Hour From 12:00 PM to 01:45 PM - Peak 1 of 1																					
Intersection	12:45 PM																				
Volume	15	269	30	1	315	4	26	0	0	30	25	177	4	1	207	40	36	23	10	109	661
Percent	4.8	85.4	9.5	0.3		13.3	86.7	0.0	0.0		12.1	85.5	1.9	0.5		36.7	33.0	21.1	9.2		
12:45 Volume	2	89	11	0	102	2	9	0	0	11	5	41	0	0	46	11	14	3	2	30	189
Peak Factor																					0.874
High Int.	12:45 PM					12:45 PM					01:00 PM					12:45 PM					
Volume	2	89	11	0	102	2	9	0	0	11	12	49	0	0	61	11	14	3	2	30	
Peak Factor					0.772					0.682					0.848					0.908	

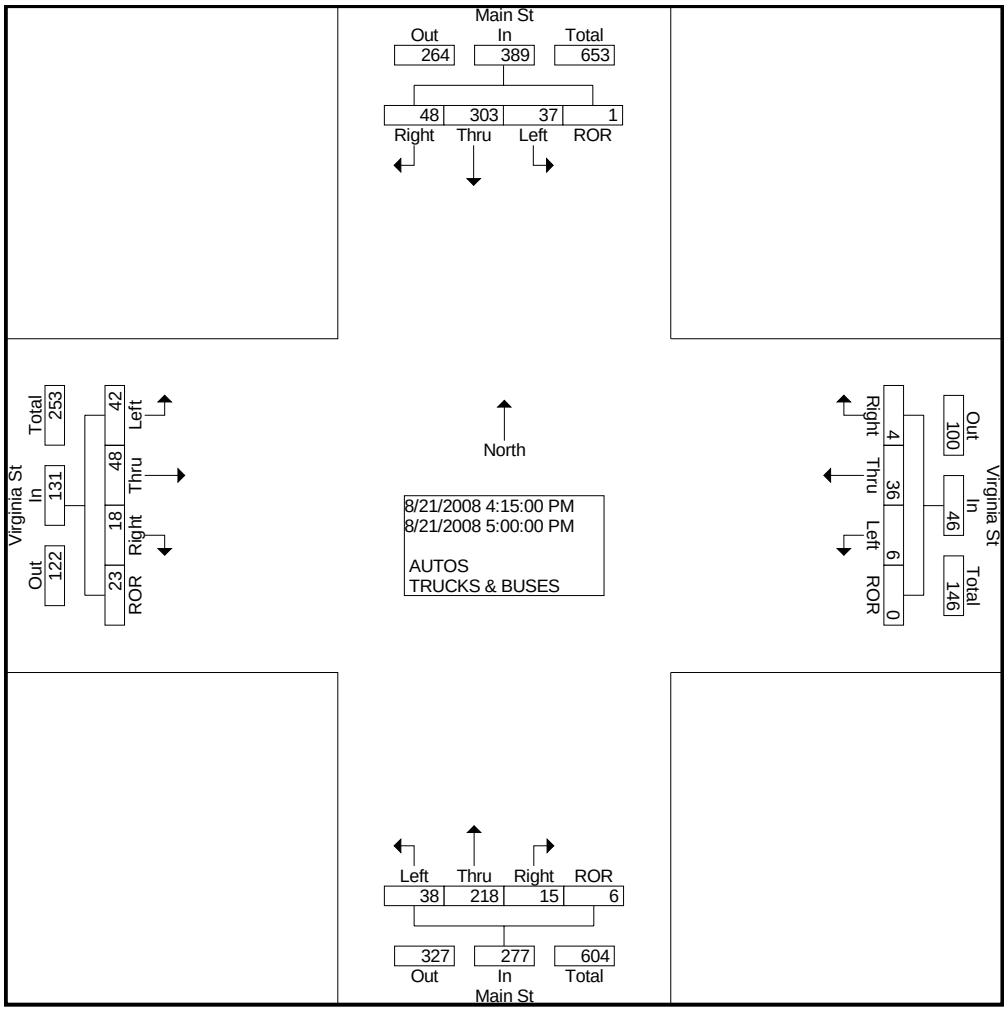


Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41752
Counted By: M Hite, L Cunningham
Weather: Hot and Sunny
Town: Buffalo

File Name : Main_St@Virginia_St_2008
Site Code : 02492008
Start Date : 8/21/2008
Page No : 5

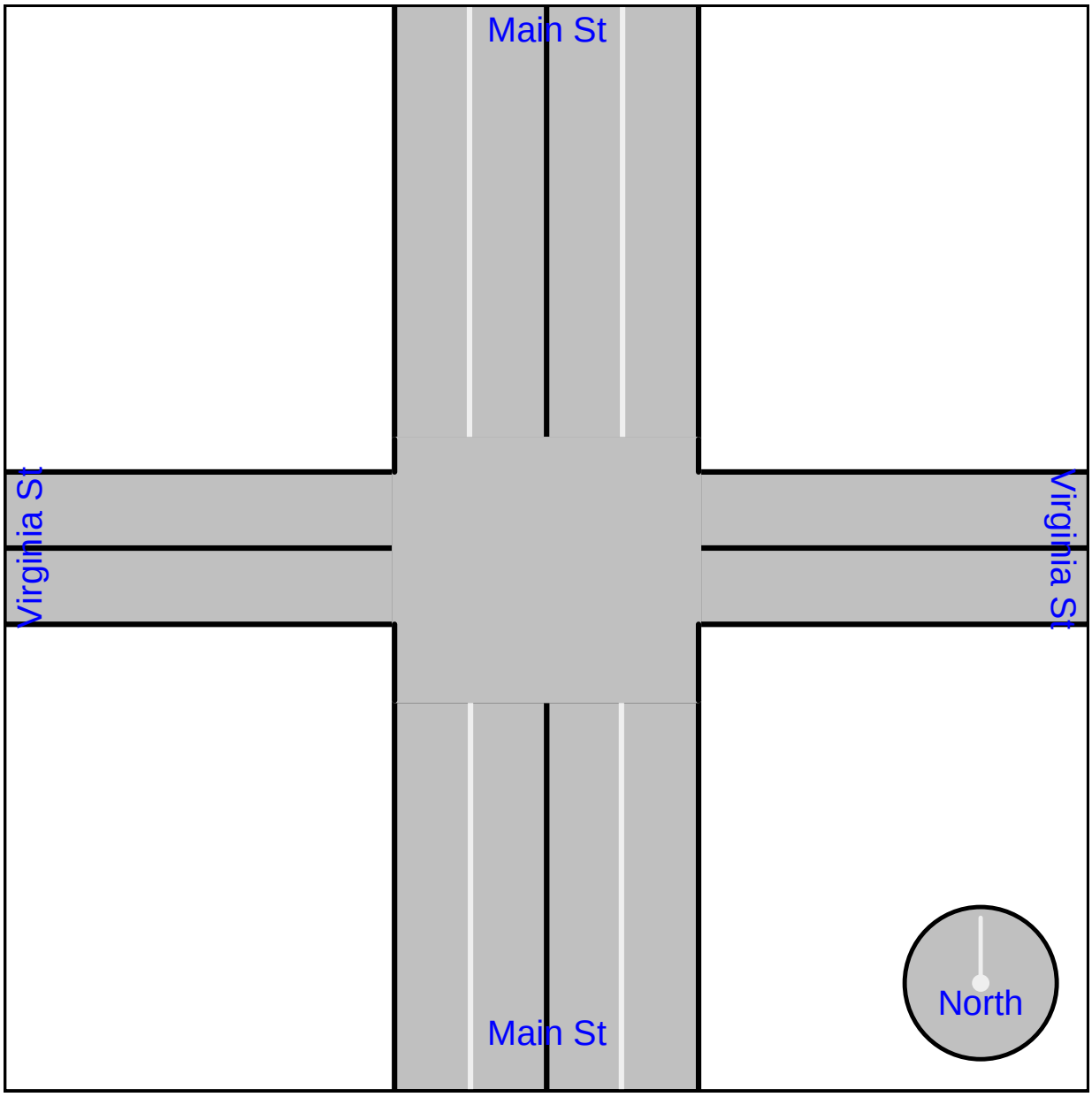
	Main St Southbound					Virginia St Westbound					Main St Northbound					Virginia St Eastbound					
Start Time	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Left	Thru	Right	ROR	App. Total	Int. Total
Peak Hour From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	37	303	48	1	389	6	36	4	0	46	38	218	15	6	277	42	48	18	23	131	843
Percent	9.5	77.9	12.3	0.3		13.0	78.3	8.7	0.0		13.7	78.7	5.4	2.2		32.1	36.6	13.7	17.6		
04:45 Volume	16	75	19	1	111	3	11	1	0	15	15	60	2	0	77	13	19	3	3	38	241
Peak Factor																					0.874
High Int.	04:45 PM					04:45 PM					04:45 PM					04:45 PM					
Volume	16	75	19	1	111	3	11	1	0	15	15	60	2	0	77	13	19	3	3	38	
Peak Factor					0.876					0.767					0.899					0.862	



Greater Buffalo Niagara Regional Transpo
438 Main Street, Suite 503
Buffalo, New York 14202-3207
Turning Movement Count

Counter: D41046, D41752
Counted By: M Hite, L Cunningham
Weather: Hot and Sunny
Town: Buffalo

File Name : Main_St@Virginia_St_2008
Site Code : 02492008
Start Date : 8/21/2008
Page No : 6



Turning Movement Counts
Elm and Broadway
AM and PM Peaks
9/29/08 - 9/30/08

15 MIN. (RAW) COUNT DATA (CARS ONLY):

TIME PERIOD	NORTHBOUND (Elm Street)				SOUTHBOUND (Elm Street)				EASTBOUND (Broadway Street)				WESTBOUND (Broadway Street)					
BEGIN	L	S	R	TOTAL	L	S	R	TOTAL	L	S	R	TOTAL	L	S	R	TOTAL	Total	
700	12	308	13	333	0	0	0	0	2	8	0	10	0	21	2	23	366	
715	38	427	12	477	0	0	0	0	4	10	0	14	0	33	6	39	530	
730	**29**	**505**	**20**	**554**	**0**	**0**	**0**	**0**	**8**	**18**	**0**	**26**	**0**	**50**	**4**	**54**	**634**	
745	**37**	**515**	**18**	**570**	**0**	**0**	**0**	**0**	**12**	**21**	**0**	**33**	**0**	**52**	**10**	**62**	**665**	2195
800	**38**	**490**	**10**	**538**	**0**	**0**	**0**	**0**	**9**	**12**	**0**	**21**	**0**	**72**	**11**	**83**	**642**	2471
815	**30**	**420**	**10**	**460**	**0**	**0**	**0**	**0**	**10**	**15**	**0**	**25**	**0**	**44**	**1**	**45**	**530**	2471
830	28	415	13	456	0	0	0	0	10	28	0	38	0	67	6	73	567	2404
845	28	335	11	374	0	0	0	0	6	33	0	39	0	64	3	67	480	2219
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:		
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:		
1600	0	259	4	263	0	0	0	0	21	47	0	68	0	40	4	44	375	
1615	1	209	5	215	0	0	0	0	25	45	0	70	0	29	5	34	319	
1630	2	230	6	238	0	0	0	0	14	25	0	39	0	22	4	26	303	
1645	**0**	**283**	**3**	**286**	**0**	**0**	**0**	**0**	**30**	**37**	**0**	**67**	**0**	**27**	**6**	**33**	**386**	1383
1700	**7**	**364**	**9**	**380**	**0**	**0**	**0**	**0**	**34**	**46**	**0**	**80**	**0**	**37**	**8**	**45**	**505**	1513
1715	**4**	**336**	**10**	**350**	**0**	**0**	**0**	**0**	**43**	**35**	**0**	**78**	**0**	**16**	**4**	**20**	**448**	1642
1730	**5**	**238**	**11**	**254**	**0**	**0**	**0**	**0**	**26**	**19**	**0**	**45**	**0**	**3**	**4**	**7**	**306**	1645
1745	5	190	7	202	0	0	0	0	25	26	0	51	0	3	3	6	259	1518

Green Time on Broadway Street: 25 sec
Green Time on Elm Street: 45 sec

Turning Movement Counts
Elm and Broadway
AM and PM Peaks
9/29/08 - 9/30/08

15 MIN. (RAW) COUNT DATA (TRUCKS ONLY):

TIME PERIOD	NORTHBOUND (Elm Street)				SOUTHBOUND (Elm Street)				EASTBOUND (Broadway Street)				WESTBOUND (Broadway Street)			
BEGIN	L	S	R	TOTAL	L	S	R	TOTAL	L	S	R	TOTAL	L	S	R	TOTAL
700	0	3	0	3	0	0	0	0	0	0	0	0	0	2	0	2
715	1	9	0	10	0	0	0	0	0	0	0	0	0	0	1	1
730	0	4	0	4	0	0	0	0	0	0	0	0	0	2	1	3
745	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0
800	1	2	1	4	0	0	0	0	0	0	0	0	0	0	0	0
815	0	4	0	4	0	0	0	0	0	1	0	1	0	0	1	1
830	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0
845	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:
1600	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
1615	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
1630	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0
1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
1715	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1
1730	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1745	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Green Time on Broadway Street: 25 sec
Green Time on Elm Street: 45 sec
Note: Trucks were counted to be vehicles with more than two axles.

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : elm&clinton_am
Site Code : 00000002
Start Date : 9/30/2008
Page No : 1

Elm & Clinton
AM Peak

Groups Printed- Unshifted

	Southbound					Clinton Westbound					Elm Northbound					Clinton Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	2	2	0	4	3	0	7	4	353	11	2	370	4	15	0	0	19	398
07:15 AM	0	0	0	3	3	0	10	1	0	11	2	490	7	3	502	3	16	0	1	20	536
07:30 AM	0	0	0	2	2	0	14	5	0	19	2	551	9	10	572	7	15	0	0	22	615
07:45 AM	0	0	0	0	0	0	24	16	0	40	6	571	6	9	592	5	29	0	0	34	666
Total	0	0	0	7	7	0	52	25	0	77	14	1965	33	24	2036	19	75	0	1	95	2215
08:00 AM	0	0	0	1	1	0	31	11	0	42	4	566	7	4	581	6	20	0	0	26	650
08:15 AM	0	0	0	4	4	0	22	7	0	29	8	565	11	3	587	6	22	0	0	28	648
08:30 AM	0	0	0	4	4	0	14	3	2	19	9	486	10	5	510	3	14	0	0	17	550
08:45 AM	0	0	0	4	4	0	8	5	0	13	7	427	10	3	447	9	23	0	1	33	497
Total	0	0	0	13	13	0	75	26	2	103	28	2044	38	15	2125	24	79	0	1	104	2345
Grand Total	0	0	0	20	20	0	127	51	2	180	42	4009	71	39	4161	43	154	0	2	199	4560
Apprch %	0	0	0	100		0	70.6	28.3	1.1		1	96.3	1.7	0.9		21.6	77.4	0	1		
Total %	0	0	0	0.4	0.4	0	2.8	1.1	0	3.9	0.9	87.9	1.6	0.9	91.2	0.9	3.4	0	0	4.4	

	Southbound					Clinton Westbound					Elm Northbound					Clinton Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	2	2	0	14	5	0	19	2	551	9	**10**	572	**7**	15	0	0	22	615
07:45 AM	0	0	0	0	0	0	24	**16**	0	40	6	**571**	6	9	**592**	5	**29**	0	0	**34**	**666**
08:00 AM	0	0	0	1	1	0	**31**	11	0	**42**	4	566	7	4	581	6	20	0	0	26	650
08:15 AM	0	0	0	**4**	**4**	0	22	7	0	29	**8**	565	**11**	3	587	6	22	0	0	28	648
Total Volume	0	0	0	7	7	0	91	39	0	130	20	2253	33	26	2332	24	86	0	0	110	2579
% App. Total	0	0	0	100		0	70	30	0		0.9	96.6	1.4	1.1		21.8	78.2	0	0		
PHF	.000	.000	.000	.438	.438	.000	.734	.609	.000	.774	.625	.986	.750	.650	.985	.857	.741	.000	.000	.809	.968

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : elm&clinton_pm
Site Code : 00000002
Start Date : 9/29/2008
Page No : 1

Elm & Clinton
PM Peak

Groups Printed- Unshifted

	Southbound					Clinton Westbound					Elm Northbound					Clinton Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	0	0	0	2	2	0	14	7	1	22	1	242	7	10	260	22	35	0	2	59	343
04:15 PM	0	0	0	4	4	0	14	3	0	17	3	213	2	1	219	16	32	0	0	48	288
04:30 PM	0	0	0	6	6	0	6	5	0	11	6	282	4	0	292	30	24	0	0	54	363
04:45 PM	0	0	0	2	2	0	9	3	0	12	4	240	4	11	259	23	30	0	10	63	336
Total	0	0	0	14	14	0	43	18	1	62	14	977	17	22	1030	91	121	0	12	224	1330
05:00 PM	0	0	0	4	4	0	13	6	1	20	6	330	2	2	340	41	35	0	0	76	440
05:15 PM	0	0	0	1	1	0	12	7	0	19	1	308	1	4	314	44	40	0	0	84	418
05:30 PM	0	0	0	0	0	0	6	4	0	10	3	207	2	1	213	26	19	0	0	45	268
05:45 PM	0	0	0	3	3	0	7	3	0	10	2	202	1	0	205	16	14	0	0	30	248
Total	0	0	0	8	8	0	38	20	1	59	12	1047	6	7	1072	127	108	0	0	235	1374
Grand Total	0	0	0	22	22	0	81	38	2	121	26	2024	23	29	2102	218	229	0	12	459	2704
Apprch %	0	0	0	100		0	66.9	31.4	1.7		1.2	96.3	1.1	1.4		47.5	49.9	0	2.6		
Total %	0	0	0	0.8	0.8	0	3	1.4	0.1	4.5	1	74.9	0.9	1.1	77.7	8.1	8.5	0	0.4	17	

	Southbound					Clinton Westbound					Elm Northbound					Clinton Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	**6**	**6**	0	6	5	0	11	**6**	282	**4**	0	292	30	24	0	0	54	363
04:45 PM	0	0	0	2	2	0	9	3	0	12	4	240	4	**11**	259	23	30	0	**10**	63	336
05:00 PM	0	0	0	4	4	0	**13**	6	**1**	**20**	6	**330**	2	2	**340**	41	35	0	0	76	**440**
05:15 PM	0	0	0	1	1	0	12	**7**	0	19	1	308	1	4	314	**44**	**40**	0	0	**84**	418
Total Volume	0	0	0	13	13	0	40	21	1	62	17	1160	11	17	1205	138	129	0	10	277	1557
% App. Total	0	0	0	100		0	64.5	33.9	1.6		1.4	96.3	0.9	1.4		49.8	46.6	0	3.6		
PHF	.000	.000	.000	.542	.542	.000	.769	.750	.250	.775	.708	.879	.688	.386	.886	.784	.806	.000	.250	.824	.885

PEAK HOUR TRAFFIC VOLUME SUMMARY

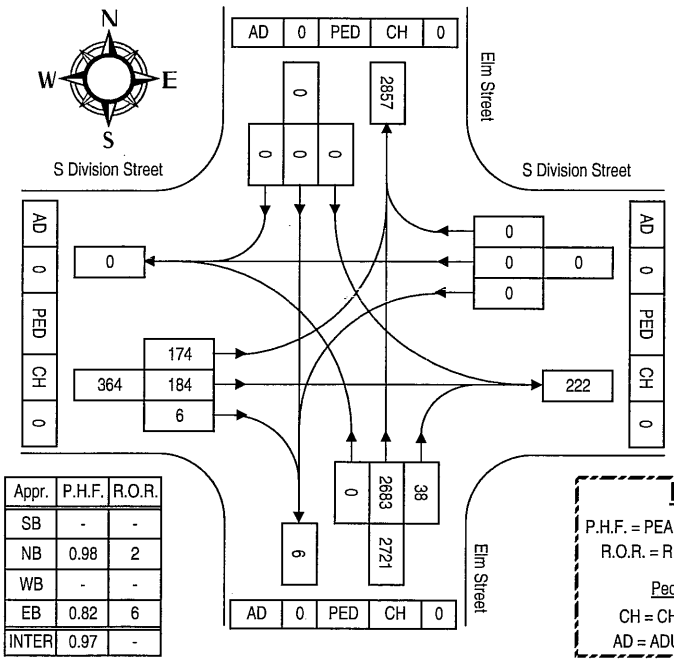
FRA, a T.Y. Lin International Company * 220 Red Tail, Suite 10, Orchard Park, NY 14127 * (716) 712-0811

Intersection of: Elm Street @ S Division Street

Date: 9/30/08 Day: Tuesday DESCRIPTION: FRA Count

ALL TRAFFIC & PEDESTRIANS

AM Peak: 7:30am to 8:30am



Appr.	P.H.F.	R.O.R.
SB	-	-
NB	0.98	2
WB	-	-
EB	0.82	6
INTER	0.97	-

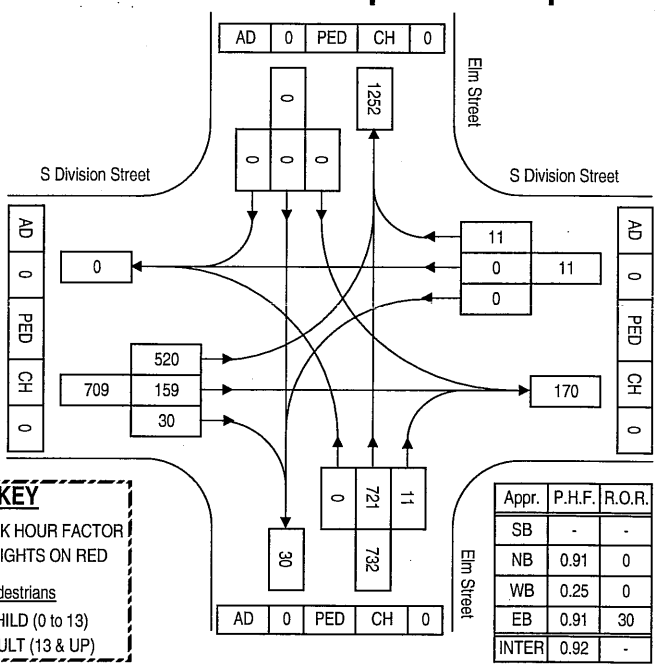
KEY

P.H.F. = PEAK HOUR FACTOR
R.O.R. = RIGHTS ON RED

Pedestrians

CH = CHILD (0 to 13)
AD = ADULT (13 & UP)

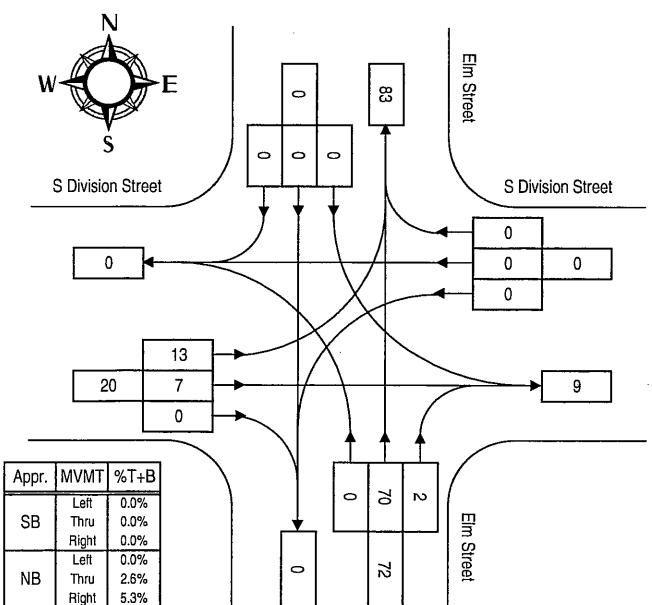
PM Peak: 4:30pm to 5:30pm



Appr.	P.H.F.	R.O.R.
SB	-	-
NB	0.91	0
WB	0.25	0
EB	0.91	30
INTER	0.92	-

TRUCKS & BUSES ONLY

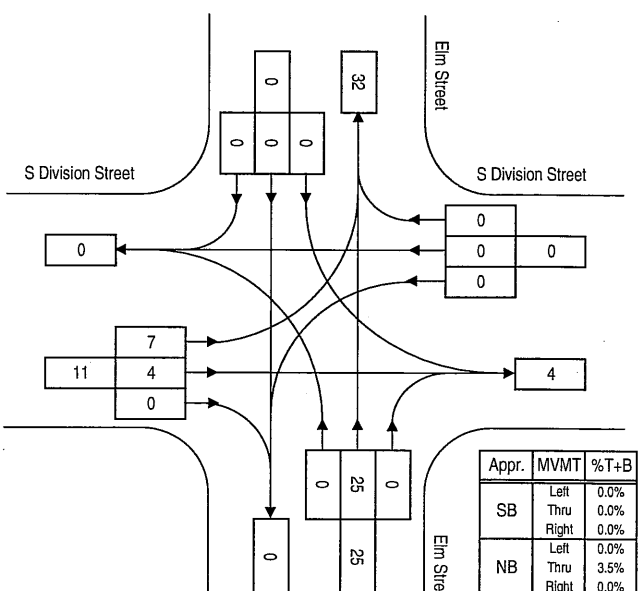
AM Peak: 7:30am to 8:30am



Appr.	MVMT	%T+B
SB	Left	0.0%
	Thru	0.0%
	Right	0.0%
NB	Left	0.0%
	Thru	2.6%
	Right	5.3%
WB	Left	0.0%
	Thru	0.0%
	Right	0.0%
EB	Left	7.5%
	Thru	3.8%
	Right	0.0%

T&B = TRUCKS & BUSES

PM Peak: 4:30pm to 5:30pm



Appr.	MVMT	%T+B
SB	Left	0.0%
	Thru	0.0%
	Right	0.0%
NB	Left	0.0%
	Thru	3.5%
	Right	0.0%
WB	Left	0.0%
	Thru	0.0%
	Right	0.0%
EB	Left	1.3%
	Thru	2.5%
	Right	0.0%

T&B = TRUCKS & BUSES

Morning Traffic Count Summary

Intersection of: Elm Street @ S Division Street
Day: Tuesday Date: 9/30/08

Municipality: Buffalo
Period of Count: 7:00am to 11:00am

ALL TRAFFIC:

TIME OF INTERVAL	INTERVAL	Southbound Elm Street 2 RIGHT	3 THRU	4 LEFT	1 ROR	TOTAL	Westbound S Division Street 6 RIGHT	7 THRU	8 LEFT	5 ROR	TOTAL	Northbound Elm Street 10 RIGHT	11 THRU	12 LEFT	9 ROR	TOTAL	Eastbound S Division Street 14 RIGHT	15 THRU	16 LEFT	13 ROR	TOTAL	GRAND TOTAL
7:00 to 7:15	1					0	0	0		0	0	1	415	0	0	416		47	10	8	65	481
7:15 to 7:30	2					0	0	0		0	0	6	597	0	0	603		17	34	3	54	657
7:30 to 7:45	3					0	0	0		0	0	10	655	0	0	665		29	49	3	81	746
7:45 to 8:00	4					0	0	0		0	0	11	658	0	0	669		59	51	1	111	780
8:00 to 8:15	5					0	0	0		0	0	7	689	0	1	697		58	41	1	100	797
8:15 to 8:30	6					0	0	0		0	0	8	681	0	1	690		38	33	1	72	762
8:30 to 8:45	7					0	0	0		0	0	6	590	0	0	596		45	39	1	85	681
8:45 to 9:00	8					0	0	0		0	0	14	532	0	0	546		64	44	3	111	657
P.H. TOTAL		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**36**	**2683**	**0**	**2**	**2721**	**0**	**184**	**174**	**6**	**364**	**3085**
P.H. FACTOR						**#DIV/0!**					**#DIV/0!**					**0.98**					**0.82**	**0.97**

TRUCKS, BUSES & PEDESTRIANS:

TIME OF INTERVAL	INTERVAL	Southbound Elm Street 18 RIGHT	19 THRU	20 LEFT	TOTAL	PED AD	PED CH	Westbound S Division Street 22 RIGHT	23 THRU	24 LEFT	TOTAL	PED AD	PED CH	Northbound Elm Street 26 RIGHT	27 THRU	28 LEFT	TOTAL	PED AD	PED CH	Eastbound S Division Street 30 RIGHT	31 THRU	32 LEFT	TOTAL	PED AD	PED CH	GRAND TOTAL
7:00 to 7:15	1				0			0	0		0			0	9	0	9				1	0	1			10
7:15 to 7:30	2				0			0	0		0			0	18	0	18				1	2	3			21
7:30 to 7:45	3				0			0	0		0			0	13	0	13				3	3	6			19
7:45 to 8:00	4				0			0	0		0			1	19	0	20				1	4	5			25
8:00 to 8:15	5				0			0	0		0			1	18	0	19				2	3	5			24
8:15 to 8:30	6				0			0	0		0			0	20	0	20				1	3	4			24
8:30 to 8:45	7				0			0	0		0			1	19	0	20				3	2	5			25
8:45 to 9:00	8				0			0	0		0			1	18	0	19				2	1	3			22
P.H. TOTAL		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**70**	**0**	**72**	**0**	**0**	**0**	**7**	**13**	**20**	**0**	**0**	**92**

Evening Traffic Count Summary

Intersection of: Elm Street @ S Division Street
Day: Tuesday Date: 9/30/08

Municipality: Buffalo
Period of Count: 3:00pm to 6:00pm

ALL TRAFFIC:

TIME OF INTERVAL	INTERVAL	Southbound Elm Street					Westbound S Division Street					Northbound Elm Street					Eastbound S Division Street					GRAND TOTAL
		2 RIGHT	3 THRU	4 LEFT	1 ROR	TOTAL	6 RIGHT	7 THRU	8 LEFT	5 ROR	TOTAL	10 RIGHT	11 THRU	12 LEFT	9 ROR	TOTAL	14 RIGHT	15 THRU	16 LEFT	13 ROR	TOTAL	
4:00 to 4:15	5					0	0	0	0	0	0	5	163	0		168		48	85	5	138	306
4:15 to 4:30	6					0	0	0		0	0	4	161	0		165		26	78	9	113	278
4:30 to 4:45	*7*					*0*	*0*	*0*		*0*	*0*	*3*	*192*	*0*		*195*		*61*	*122*	*6*	*189*	*384*
4:45 to 5:00	*8*					*0*	*0*	*0*		*0*	*0*	*2*	*171*	*0*		*173*		*36*	*106*	*12*	*154*	*327*
5:00 to 5:15	*9*					*0*	*0*	*0*		*0*	*0*	*5*	*197*	*0*		*202*		*31*	*158*	*5*	*194*	*396*
5:15 to 5:30	*10*					*0*	*11*	*0*		*0*	*11*	*1*	*161*	*0*		*162*		*31*	*134*	*7*	*172*	*345*
5:30 to 5:45	11					0	0	0		0	0	6	130	0		136		29	101	5	135	271
5:45 to 6:00	12					0	0	0		0	0	2	126	0		128		29	72	5	106	234
P.H. TOTAL		**0**	**0**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**11**	**11**	**721**	**0**	**0**	**732**	**0**	**159**	**520**	**30**	**709**	**1452**
P.H. FACTOR						**#DIV/0!**					**0.25**					**0.91**					**0.91**	**0.92**

TRUCKS, BUSES & PEDESTRIANS:

TIME OF INTERVAL	INTERVAL	Southbound Elm Street						Westbound S Division Street						Northbound Elm Street						Eastbound S Division Street						GRAND TOTAL
		18 RIGHT	19 THRU	20 LEFT	TOTAL	PED AD	PED CH	22 RIGHT	23 THRU	24 LEFT	TOTAL	PED AD	PED CH	26 RIGHT	27 THRU	28 LEFT	TOTAL	PED AD	PED CH	30 RIGHT	31 THRU	32 LEFT	TOTAL	PED AD	PED CH	
4:00 to 4:15	5				0			0	0		0			0	8	0	8				2	1	3			11
4:15 to 4:30	6				0			0	0		0			0	5	0	5				1	1	2			7
4:30 to 4:45	*7*				*0*			*0*	*0*		*0*			*0*	*13*	*0*	*13*				*2*	*0*	*2*			*15*
4:45 to 5:00	*8*				*0*			*0*	*0*		*0*			*0*	*4*	*0*	*4*				*1*	*2*	*3*			*7*
5:00 to 5:15	*9*				*0*			*0*	*0*		*0*			*0*	*5*	*0*	*5*				*1*	*3*	*4*			*9*
5:15 to 5:30	*10*				*0*			*0*	*0*		*0*			*0*	*3*	*0*	*3*				*0*	*2*	*2*			*5*
5:30 to 5:45	11				0			0	0		0			1	2	0	3				0	3	3			6
5:45 to 6:00	12				0			0	0		0			0	3	0	3				1	1	2			5
P.H. TOTAL		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**0**	**25**	**0**	**0**	**0**	**4**	**7**	**11**	**0**	**0**	**36**

PEAK HOUR TRAFFIC VOLUME SUMMARY

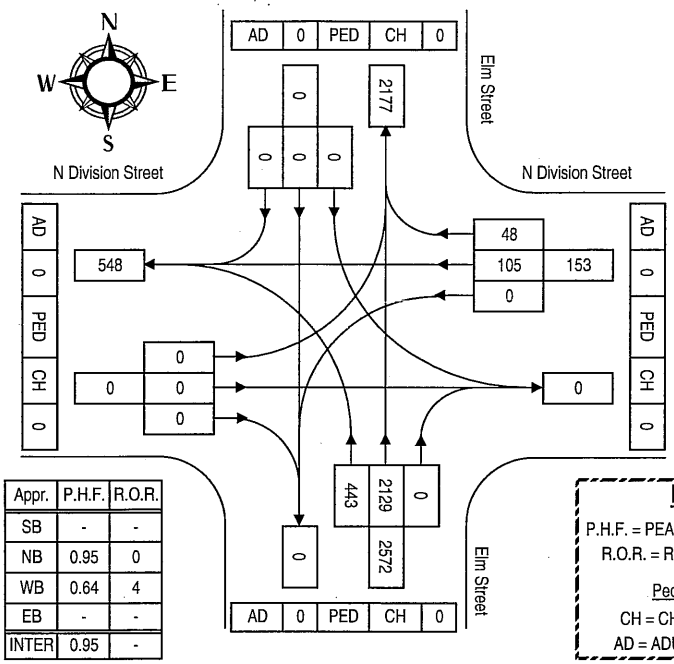
FRA, a T.Y. Lin International Company * 220 Red Tail, Suite 10, Orchard Park, NY 14127 * (716) 712-0811

Intersection of: Elm Street @ N Division Street

Date: 9/30/08 Day: Tuesday DESCRIPTION: FRA Count

ALL TRAFFIC & PEDESTRIANS

AM Peak: 7:30am to 8:30am



Appr.	P.H.F.	R.O.R.
SB	-	-
NB	0.95	0
WB	0.64	4
EB	-	-
INTER	0.95	-

KEY

P.H.F. = PEAK HOUR FACTOR

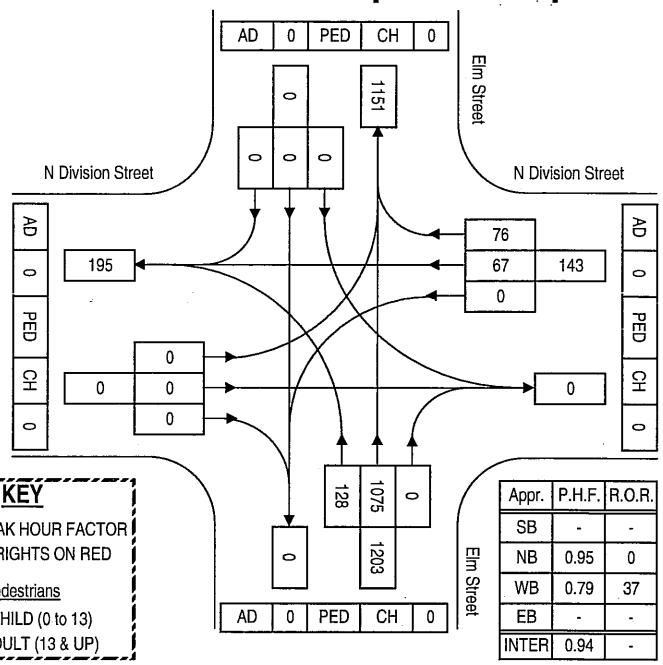
R.O.R. = RIGHTS ON RED

Pedestrians

CH = CHILD (0 to 13)

AD = ADULT (13 & UP)

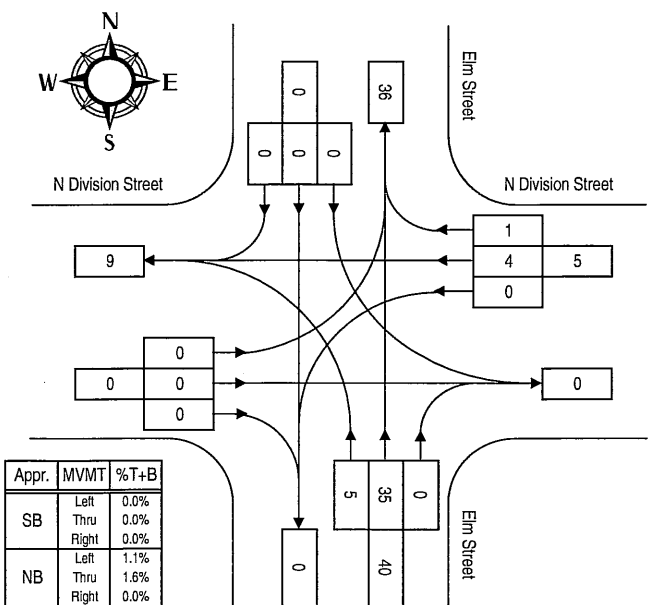
PM Peak: 4:30pm to 5:30pm



Appr.	P.H.F.	R.O.R.
SB	-	-
NB	0.95	0
WB	0.79	37
EB	-	-
INTER	0.94	-

TRUCKS & BUSES ONLY

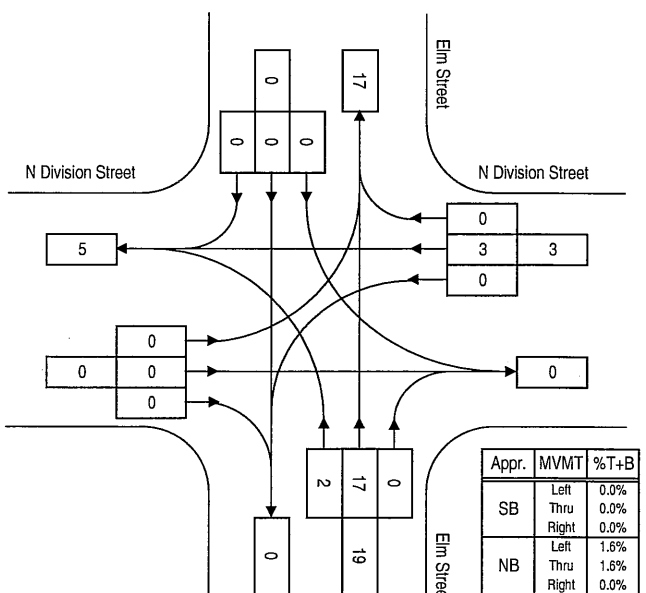
AM Peak: 7:30am to 8:30am



Appr.	MVMT	%T+B
SB	Left	0.0%
	Thru	0.0%
	Right	0.0%
NB	Left	1.1%
	Thru	1.6%
	Right	0.0%
WB	Left	0.0%
	Thru	3.8%
	Right	2.1%
EB	Left	0.0%
	Thru	0.0%
	Right	0.0%

T&B = TRUCKS & BUSES

PM Peak: 4:30pm to 5:30pm



Appr.	MVMT	%T+B
SB	Left	0.0%
	Thru	0.0%
	Right	0.0%
NB	Left	1.6%
	Thru	1.6%
	Right	0.0%
WB	Left	0.0%
	Thru	4.5%
	Right	0.0%
EB	Left	0.0%
	Thru	0.0%
	Right	0.0%

T&B = TRUCKS & BUSES

Morning Traffic Count Summary

Intersection of: Elm Street @ N Division Street
Day: Tuesday Date: 9/30/08

Municipality: Buffalo
Period of Count: 7:00am to 11:00am

ALL TRAFFIC:

TIME OF INTERVAL	INTERVAL	Southbound Elm Street					Westbound N Division Street					Northbound Elm Street					Eastbound N Division Street					GRAND TOTAL
		2 RIGHT	3 THRU	4 LEFT	1 ROR	TOTAL	6 RIGHT	7 THRU	8 LEFT	5 ROR	TOTAL	10 RIGHT	11 THRU	12 LEFT	9 ROR	TOTAL	14 RIGHT	15 THRU	16 LEFT	13 ROR	TOTAL	
7:00 to 7:15	1					0	2	10		3	15		345	53		398					0	413
7:15 to 7:30	2					0	8	11		1	20		516	86		602					0	622
7:30 to 7:45	*3*					*0*	*12*	*28*		*0*	*40*		*560*	*118*		*678*					*0*	*718*
7:45 to 8:00	*4*					*0*	*21*	*37*		*2*	*60*		*466*	*101*		*567*					*0*	*627*
8:00 to 8:15	*5*					*0*	*6*	*28*		*1*	*35*		*543*	*112*		*655*					*0*	*690*
8:15 to 8:30	*6*					*0*	*5*	*12*		*1*	*18*		*560*	*112*		*672*					*0*	*690*
8:30 to 8:45	7					0	7	20		1	28		472	102		574					0	602
8:45 to 9:00	8					0	5	17		0	22		434	92		526					0	548
P.H. TOTAL		**0**	**0**	**0**	**0**	**0**	**44**	**105**	**0**	**4**	**153**	**0**	**2129**	**443**	**0**	**2572**	**0**	**0**	**0**	**0**	**0**	**2725**
P.H. FACTOR						**#DIV/0!**					**0.64**					**0.95**					**#DIV/0!**	**0.95**

TRUCKS, BUSES & PEDESTRIANS:

TIME OF INTERVAL	INTERVAL	Southbound Elm Street						Westbound N Division Street						Northbound Elm Street						Eastbound N Division Street						GRAND TOTAL
		18 RIGHT	19 THRU	20 LEFT	TOTAL	PED AD	PED CH	22 RIGHT	23 THRU	24 LEFT	TOTAL	PED AD	PED CH	26 RIGHT	27 THRU	28 LEFT	TOTAL	PED AD	PED CH	30 RIGHT	31 THRU	32 LEFT	TOTAL	PED AD	PED CH	
7:00 to 7:15	1				0			0	1		1				3	1	4						0			5
7:15 to 7:30	2				0			2	1		3				6	0	6						0			9
7:30 to 7:45	*3*				*0*			*0*	*1*		*1*				*5*	*2*	*7*						*0*			*8*
7:45 to 8:00	*4*				*0*			*0*	*2*		*2*				*13*	*0*	*13*						*0*			*15*
8:00 to 8:15	*5*				*0*			*1*	*1*		*2*				*7*	*3*	*10*						*0*			*12*
8:15 to 8:30	*6*				*0*			*0*	*0*		*0*				*10*	*0*	*10*						*0*			*10*
8:30 to 8:45	7				0			0	1		1				7	2	9						0			10
8:45 to 9:00	8				0			0	4		4				9	0	9						0			13
P.H. TOTAL		**0**	**0**	**0**	**0**	**0**	**0**	**1**	**4**	**0**	**5**	**0**	**0**	**0**	**35**	**5**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**45**

Evening Traffic Count Summary

Intersection of: Elm Street @ N Division Street
Day: Monday Date: 9/29/08

Municipality: Buffalo
Period of Count: 3:00pm to 6:00pm

ALL TRAFFIC:

TIME OF INTERVAL	INTERVAL	Southbound Elm Street					Westbound N Division Street					Northbound Elm Street					Eastbound N Division Street					GRAND TOTAL
		2 RIGHT	3 THRU	4 LEFT	1 ROR	TOTAL	6 RIGHT	7 THRU	8 LEFT	5 ROR	TOTAL	10 RIGHT	11 THRU	12 LEFT	9 ROR	TOTAL	14 RIGHT	15 THRU	16 LEFT	13 ROR	TOTAL	
4:00 to 4:15	5					0	6	14		12	32		226	19		245					0	277
4:15 to 4:30	6					0	6	16		8	30		207	34		241					0	271
4:30 to 4:45	*7*					*0*	*10*	*24*		*11*	*45*		*258*	*40*		*298*					*0*	*343*
4:45 to 5:00	*8*					*0*	*5*	*20*		*7*	*32*		*239*	*40*		*279*					*0*	*311*
5:00 to 5:15	*9*					*0*	*13*	*14*		*15*	*42*		*293*	*23*		*316*					*0*	*358*
5:15 to 5:30	*10*					*0*	*11*	*9*		*4*	*24*		*285*	*25*		*310*					*0*	*334*
5:30 to 5:45	11					0	3	7		6	16		216	17		233					0	249
5:45 to 6:00	12					0	5	5		2	12		195	15		210					0	222
P.H. TOTAL		**0**	**0**	**0**	**0**	**0**	**39**	**67**	**0**	**37**	**143**	**0**	**1075**	**128**	**0**	**1203**	**0**	**0**	**0**	**0**	**0**	**1346**
P.H. FACTOR						**#DIV/0!**					**0.79**					**0.95**					**#DIV/0!**	**0.94**

TRUCKS, BUSES & PEDESTRIANS:

TIME OF INTERVAL	INTERVAL	Southbound Elm Street						Westbound N Division Street						Northbound Elm Street						Eastbound N Division Street						GRAND TOTAL
		18 RIGHT	19 THRU	20 LEFT	TOTAL	PED AD	PED CH	22 RIGHT	23 THRU	24 LEFT	TOTAL	PED AD	PED CH	26 RIGHT	27 THRU	28 LEFT	TOTAL	PED AD	PED CH	30 RIGHT	31 THRU	32 LEFT	TOTAL	PED AD	PED CH	
4:00 to 4:15	5				0			0	3		3				4	1	5						0			8
4:15 to 4:30	6				0			0	2		2				3	1	4						0			6
4:30 to 4:45	*7*				*0*			*0*	*1*		*1*				*6*	*0*	*6*						*0*			*7*
4:45 to 5:00	*8*				*0*			*0*	*1*		*1*				*4*	*0*	*4*						*0*			*5*
5:00 to 5:15	*9*				*0*			*0*	*0*		*0*				*4*	*0*	*4*						*0*			*4*
5:15 to 5:30	*10*				*0*			*0*	*1*		*1*				*3*	*2*	*5*						*0*			*6*
5:30 to 5:45	11				0			1	0		1				1	0	1						0			2
5:45 to 6:00	12				0			0	2		2				0	0	0						0			2
P.H. TOTAL		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**3**	**0**	**0**	**0**	**17**	**2**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**22**

Morning Traffic Count Summary

Intersection of ELM ST @ S. DIVISION ST Municipality: BUFFALO, N.Y. Sheet: ____ of ____

Day: TUESDAY Date: 9/30/2008 Period of Count: 7:00 am to 9:00 am Counter #: LEFT TURN ON RED

ALL TRAFFIC:

TIME OF INTERVAL	INTER	From North on: ELM ST					From East on: S. DIVISION ST					From South on: ELM ST					From West on: S. DIVISION ST					GRA TOT
		2 RIGHT	3 THRU	4 LEFT	1 ROR	TOTAL	6 RIGHT	7 THRU	8 LEFT	5 ROR	TOTAL	10 RIGHT	11 THRU	12 LEFT	9 ROR	TOTAL	14 RIGHT	15 THRU	16 LEFT	13 [illegible]	TOTAL	
7:00 to 7:15	1	0	0	0	0		0	0	0	0		1	415	0	0		0	47	10	8		
7:15 to 7:30	2	0	0	0	0		0	0	0	0		6	597	0	0		0	17	34	3		
7:30 to 7:45	3	0	0	0	0		0	0	0	0		10	655	0	0		0	29	49	3		
7:45 to 8:00	4	0	0	0	0		0	0	0	0		11	658	0	0		0	59	51	1		
8:00 to 8:15	5	0	0	0	0		0	0	0	0		7	689	0	1		0	58	41	1		
8:15 to 8:30	6	0	0	0	0		0	0	0	0		8	681	0	1		0	38	33	1		
8:30 to 8:45	7	0	0	0	0		0	0	0	0		6	590	0	0		0	45	39	1		
8:45 to 9:00	8	0	0	0	0		0	0	0	0		14	532	0	0		0	64	44	3		
9:00 to 9:15	9																					
9:15 to 9:30	10																					
9:30 to 9:45	11																					
9:45 to 10:00	12																					

TRUCKS, BUSES & PEDESTRIANS:

TIME OF INTERVAL	INTER	From North on: ELM ST				PED		From East on: S. DIVISION ST				PED		From South on: ELM ST				PED		From West on: S. DIVISION ST				PED		GRA TOT
		18 RIGHT	19 THRU	20 LEFT	TOTAL	AD	CH	22 RIGHT	23 THRU	24 LEFT	TOTAL	AD	CH	26 RIGHT	27 THRU	28 LEFT	TOTAL	AD	CH	30 RIGHT	31 THRU	32 LEFT	TOTAL	AD	CH	
7:00 to 7:15	1	0	0	0				0	0	0				0	9	0				0	1	0				
7:15 to 7:30	2	0	0	0				0	0	0				0	18	0				0	1	2				
7:30 to 7:45	3	0	0	0				0	0	0				0	13	0				0	3	3				
7:45 to 8:00	4	0	0	0				0	0	0				1	19	0				0	1	4				
8:00 to 8:15	5	0	0	0				0	0	0				1	18	0				0	2	3				
8:15 to 8:30	6	0	0	0				0	0	0				0	20	0				0	1	3				
8:30 to 8:45	7	0	0	0				0	0	0				1	19	0				0	3	2				
8:45 to 9:00	8	0	0	0				0	0	0				1	18	0				0	2	1				
9:00 to 9:15	9																									
9:15 to 9:30	10																									
9:30 to 9:45	11																									
9:45 to 10:00	12																									

Traffic Count Summary

Intersection of ELM ST @ S. DIVISION ST Municipality: BUFFALO, N.Y. Sheet: ____ of ____

Day: MONDAY Date: 9/29/2008 Period of Count: ____ to ____ Counter #: ____

LEFT TURN ON RED

ALL TRAFFIC:

Time of Interval	Interval Number	ELM ST (From North on) 2 RIGHT	3 THRU	4 LEFT	1 ROB.	TOTAL	S. DIVISION ST (From East on) 6 RIGHT	7 THRU	8 LEFT	5 ROB.	TOTAL	ELM ST (From South on) 10 RIGHT	11 THRU	12 LEFT	9 ROB.	TOTAL	S. DIVISION (From West on) 14 RIGHT	15 THRU	16 LEFT	13 ROB.	TOTAL	GRAND TOTAL
400 415	1	0	0	0	0		0	0	0	0		5	163	0	0		0	48	85	5		
415 430	2	0	0	0	0		0	0	0	0		4	161	0	0		0	26	78	9		
430 445	3	0	0	0	0		0	0	0	0		3	192	0	0		0	61	122	6		
445 500	4	0	0	0	0		0	0	0	0		2	171	0	0		0	36	106	12		
500 515	5	0	0	0	0		0	0	0	0		5	197	0	0		0	31	158	5		
515 530	6	0	0	0	0		0	0	0	0		1	161	0	0		0	31	134	7		
530 545	7	0	0	0	0		0	0	0	0		6	130	0	0		0	29	101	5		
545 600	8	0	0	0	0		0	0	0	0		2	126	0	0		0	29	72	5		
	9																					
	10																					
	11																					
	12																					

TRUCKS, BUSES & PEDESTRIANS:

Time of Interval	Interval Number	ELM ST (From North on) 18 RIGHT	19 THRU	20 LEFT	TOTAL	PED AD	PED CH	S. DIVISION ST (From East on) 22 RIGHT	23 THRU	24 LEFT	TOTAL	PED AD	PED CH	ELM ST (From South on) 26 RIGHT	27 THRU	28 LEFT	TOTAL	PED AD	PED CH	S. DIVISION ST (From West on) 30 RIGHT	31 THRU	32 LEFT	TOTAL	PED AD	PED CH	GRAND TOTAL
400 415	1	0	0	0				0	0	0				0	8	0				0	2	1				
415 430	2	0	0	0				0	0	0				0	5	0				0	1	1				
430 445	3	0	0	0				0	0	0				0	13	0				0	2	0				
445 500	4	0	0	0				0	0	0				0	4	0				0	1	2				
500 515	5	0	0	0				0	0	0				0	5	0				0	1	3				
515 530	6	0	0	0				0	0	0				0	3	0				0	0	2				
530 545	7	0	0	0				0	0	0				1	2	0				0	0	3				
545 600	8	0	0	0				0	0	0				0	3	0				0	1	1				
	9																									
	10																									
	11																									
	12																									

Morning Traffic Count Summary

Intersection of ELM ST. + NORTH DIVISION ST. Municipality: BUFFALO Sheet: 1 of 1

Day: TUESDAY Date: SEPTEMBER 30, 2008 Period of Count: 7:00 am to 9:00 am Counter #: V1399

ALL TRAFFIC:

TIME OF INTERVAL	INTER	From North on: 2 RIGHT	3 THRU	4 LEFT	1 ROR	TOTAL	From East on: 6 RIGHT	7 THRU	8 LEFT	5 ROR	TOTAL	From South on: ELM ST 10 RIGHT	11 THRU	12 LEFT	9 ROR	TOTAL	From West on: 14 RIGHT	15 THRU	16 LEFT	13 ROR	TOTAL	GRAND TOTAL
7:00 to 7:15	1												345	53								
7:15 to 7:30	2												516	86								
7:30 to 7:45	3												560	118								
7:45 to 8:00	4												466	101								
8:00 to 8:15	5												543	112								
8:15 to 8:30	6												560	112								
8:30 to 8:45	7												472	102								
8:45 to 9:00	8												434	92								
9:00 to 9:15	9																					
9:15 to 9:30	10																					
9:30 to 9:45	11																					
9:45 to 10:00	12																					

TRUCKS, BUSES & PEDESTRIANS:

TIME OF INTERVAL	INTER	From North on: 18 RIGHT	19 THRU	20 LEFT	TOTAL	PED AD	PED CH	From East on: 22 RIGHT	23 THRU	24 LEFT	TOTAL	PED AD	PED CH	From South on: ELM ST. 26 RIGHT	27 THRU	28 LEFT	TOTAL	PED AD	PED CH	From West on: 30 RIGHT	31 THRU	32 LEFT	TOTAL	PED AD	PED CH	GRAND TOTAL
7:00 to 7:15	1														3	1										
7:15 to 7:30	2														6	0										
7:30 to 7:45	3														5	2										
7:45 to 8:00	4														13	0										
8:00 to 8:15	5														7	3										
8:15 to 8:30	6														10	0										
8:30 to 8:45	7														7	2										
8:45 to 9:00	8														9	0										
9:00 to 9:15	9																									
9:15 to 9:30	10																									
9:30 to 9:45	11																									
9:45 to 10:00	12																									

09/30/2008 13:29 7166810788 SAM FASSARI PAGE 02

Morning Traffic Count Summary

Intersection of Elm & No. Division Sts. Municipality: BUFFALO Sheet: 3 of 3

Day: TUESDAY Date: 9-30-08 Period of Count: 7:00 am to 9:00 am Counter #: 1

ALL TRAFFIC:

TIME OF INTERVAL	INTER	From North on: 2 RIGHT	3 THRU	4 LEFT	1 ROR	TOTAL	From East on: No. Division St 6 RIGHT	7 THRU	8 LEFT	5 ROR	TOTAL	From South on: 10 RIGHT	11 THRU	12 LEFT	9 ROR	TOTAL	From West on: 14 RIGHT	15 THRU	16 LEFT	13 ROR	TOTAL	GRAND TOTAL
7:00 to 7:15	1						2	10		3												
7:15 to 7:30	2						8	11		1												
7:30 to 7:45	3						12	28		—												
7:45 to 8:00	4						21	37		2												
8:00 to 8:15	5						6	28		1												
8:15 to 8:30	6						5	12		1												
8:30 to 8:45	7						7	20		1												
8:45 to 9:00	8						5	17		—												
9:00 to 9:15	9																					
9:15 to 9:30	10																					
9:30 to 9:45	11																					
9:45 to 10:00	12																					

TRUCKS, BUSES & PEDESTRIANS:

TIME OF INTERVAL	INTER	From North on: 34 RIGHT	35 THRU	36 LEFT	TOTAL	PED 19 AD	PED 20 CH	From East on: No. Division St 38 RIGHT	39 THRU	40 LEFT	TOTAL	PED 23 AD	PED 24 CH	From South on: 42 RIGHT	43 THRU	44 LEFT	TOTAL	PED 27 AD	PED 28 CH	From West on: 46 RIGHT	47 THRU	48 LEFT	TOTAL	PED 31 AD	PED 32 CH	GRAND TOTAL
7:00 to 7:15	1							—	1																	
7:15 to 7:30	2							2	1																	
7:30 to 7:45	3							—	1																	
7:45 to 8:00	4							—	2																	
8:00 to 8:15	5							1	1																	
8:15 to 8:30	6							—	—																	
8:30 to 8:45	7							—	1																	
8:45 to 9:00	8							—	4																	
9:00 to 9:15	9																									
9:15 to 9:30	10																									
9:30 to 9:45	11																									
9:45 to 10:00	12																									

Evening Traffic Count Summary

Intersection of Elm & North Division Sts. Municipality: BUFFALO Sheet: 2 of 3

Day: MONDAY Date: 9-29-08 Period of Count: 4:00 pm to 6:00 pm Counter #: 1

ALL TRAFFIC:

TIME OF INTERVAL	INTER	From North on: 2 RIGHT	3 THRU	4 LEFT	1 ROR	TOTAL	From East on: No. Division Sts 6 RIGHT	7 THRU	8 LEFT	5 ROR	TOTAL	From South on: 10 RIGHT	11 THRU	12 LEFT	9 ROR	TOTAL	From West on: 14 RIGHT	15 THRU	16 LEFT	13 ROR	TOTAL	GRAND TOTAL
3:00 to 3:15	1																					
3:15 to 3:30	2																					
3:30 to 3:45	3																					
3:45 to 4:00	4																					
4:00 to 4:15	5						6	14		12												
4:15 to 4:30	6						6	16		8												
4:30 to 4:45	7						10	24		11												
4:45 to 5:00	8						5	20		7												
5:00 to 5:15	9						13	14		15												
5:15 to 5:30	10						11	9		4												
5:30 to 5:45	11						3	7		6												
5:45 to 6:00	12						5	5		2												

TRUCKS, BUSES & PEDESTRIANS:

TIME OF INTERVAL	INTER	From North on: 34 RIGHT	35 THRU	36 LEFT	TOTAL	PED 19 AD	PED 20 CH	From East on: No. Division St. 38 RIGHT	39 THRU	40 LEFT	TOTAL	PED 23 AD	PED 24 CH	From South on: 42 RIGHT	43 THRU	44 LEFT	TOTAL	PED 27 AD	PED 28 CH	From West on: 46 RIGHT	47 THRU	48 LEFT	TOTAL	PED 31 AD	PED 32 CH	GRAND TOTAL
3:00 to 3:15	1																									
3:15 to 3:30	2																									
3:30 to 3:45	3																									
3:45 to 4:00	4																									
4:00 to 4:15	5							1	3																	
4:15 to 4:30	6							1	2																	
4:30 to 4:45	7							1	1																	
4:45 to 5:00	8							1	1																	
5:00 to 5:15	9							1	1																	
5:15 to 5:30	10							1	1																	
5:30 to 5:45	11							1	1																	
5:45 to 6:00	12							1	2																	

Traffic Count Summary

Intersection of ELM ST. + NORTH DIVISION ST. Municipality: BUFFALO Sheet: 1 of 1

Day: MONDAY Date: SEPTEMBER 29, 2008 Period of Count: 4:00 pm to 6:00 pm Counter #: V1399

ALL TRAFFIC:

TIME OF INTERVAL	INTER	From North on: 2 RIGHT	3 THRU	4 LEFT	1 ROR	TOTAL	From East on: 6 RIGHT	7 THRU	8 LEFT	5 ROR	TOTAL	From South on: ELM ST. 10 RIGHT	11 THRU	12 LEFT	9 ROR	TOTAL	From West on: 14 RIGHT	15 THRU	16 LEFT	13 ROR	TOTAL	GRAND TOTAL
4:00-4:15	1												226	19								
4:15-4:30	2												207	34								
4:30-4:45	3												258	40								
4:45-5:00	4												239	40								
5:00-5:15	5												293	23								
5:15-5:30	6												285	25								
5:30-5:45	7												216	17								
5:45-6:00	8												195	15								
6:00-6:15	9																					
6:15-6:30	10																					
6:30-6:45	11																					
6:45-7:00	12																					

TRUCKS, BUSES & PEDESTRIANS:

TIME OF INTERVAL	INTER	From North on: 18 RIGHT	19 THRU	20 LEFT	TOTAL	PED AD	PED CH	From East on: 22 RIGHT	23 THRU	24 LEFT	TOTAL	PED AD	PED CH	From South on: ELM ST. 26 RIGHT	27 THRU	28 LEFT	TOTAL	PED AD	PED CH	From West on: 30 RIGHT	31 THRU	32 LEFT	TOTAL	PED AD	PED CH	GRAND TOTAL
4:00-4:15	1														4	1										
4:15-4:30	2														3	1										
4:30-4:45	3														6	0										
4:45-5:00	4														4	0										
5:00-5:15	5														4	0										
5:15-5:30	6														3	2										
5:30-5:45	7														1	0										
5:45-6:00	8														0	0										
6:00-6:15	9																									
6:15-6:30	10																									
6:30-6:45	11																									
6:45-7:00	12																									

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : elm&swan_am
Site Code : 00000011
Start Date : 9/30/2008
Page No : 1

Elm & Swan
AM Peak

Groups Printed- Unshifted

	Southbound					Swan Westbound					Elm Northbound					Swan Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	6	6	0	23	15	0	38	74	397	5	1	477	0	0	0	0	0	521
07:15 AM	0	0	0	10	10	0	25	9	3	37	94	545	6	5	650	0	0	0	1	1	698
07:30 AM	0	0	0	28	28	0	40	24	6	70	113	622	10	5	750	0	0	0	1	1	849
07:45 AM	0	0	0	27	27	0	61	26	6	93	127	682	14	8	831	0	0	0	2	2	953
Total	0	0	0	71	71	0	149	74	15	238	408	2246	35	19	2708	0	0	0	4	4	3021
08:00 AM	0	0	0	22	22	0	54	17	9	80	123	714	13	6	856	0	0	0	1	1	959
08:15 AM	0	0	0	20	20	0	33	32	3	68	108	661	13	4	786	0	0	0	0	0	874
08:30 AM	0	0	0	18	18	0	42	23	3	68	114	575	10	2	701	0	0	0	0	0	787
08:45 AM	0	0	0	23	23	0	28	11	5	44	95	500	18	6	619	0	0	0	0	0	686
Total	0	0	0	83	83	0	157	83	20	260	440	2450	54	18	2962	0	0	0	1	1	3306
Grand Total	0	0	0	154	154	0	306	157	35	498	848	4696	89	37	5670	0	0	0	5	5	6327
Apprch %	0	0	0	100		0	61.4	31.5	7		15	82.8	1.6	0.7		0	0	0	100		
Total %	0	0	0	2.4	2.4	0	4.8	2.5	0.6	7.9	13.4	74.2	1.4	0.6	89.6	0	0	0	0.1	0.1	

	Southbound					Swan Westbound					Elm Northbound					Swan Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	**28**	**28**	0	40	24	6	70	113	622	10	5	750	0	0	0	1	1	849
07:45 AM	0	0	0	27	27	0	**61**	26	6	**93**	**127**	682	**14**	**8**	831	0	0	0	**2**	**2**	953
08:00 AM	0	0	0	22	22	0	54	17	**9**	80	123	**714**	13	6	**856**	0	0	0	1	1	**959**
08:15 AM	0	0	0	20	20	0	33	**32**	3	68	108	661	13	4	786	0	0	0	0	0	874
Total Volume	0	0	0	97	97	0	188	99	24	311	471	2679	50	23	3223	0	0	0	4	4	3635
% App. Total	0	0	0	100		0	60.5	31.8	7.7		14.6	83.1	1.6	0.7		0	0	0	100		
PHF	.000	.000	.000	.866	.866	.000	.770	.773	.667	.836	.927	.938	.893	.719	.941	.000	.000	.000	.500	.500	.948

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : elm&swan_pm
Site Code : 00000001
Start Date : 9/29/2008
Page No : 1

Elm & Swan
PM Peak

Groups Printed- Unshifted

	Southbound					Swan Westbound					Elm Northbound					Swan Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	0	0	0	28	28	0	57	22	9	88	22	138	6	9	175	0	0	0	2	2	293
04:15 PM	0	0	0	9	9	0	45	16	1	62	24	137	4	2	167	0	0	0	1	1	239
04:30 PM	0	0	0	23	23	0	72	20	7	99	29	156	4	6	195	0	0	0	0	0	317
04:45 PM	0	0	0	30	30	0	59	14	6	79	27	160	5	8	200	0	0	0	1	1	310
Total	0	0	0	90	90	0	233	72	23	328	102	591	19	25	737	0	0	0	4	4	1159
05:00 PM	0	0	0	23	23	0	64	32	15	111	14	142	3	7	166	0	0	0	2	2	302
05:15 PM	0	0	0	13	13	0	42	22	5	69	19	144	5	7	175	0	0	0	1	1	258
05:30 PM	0	0	0	10	10	0	34	17	4	55	17	99	4	0	120	0	0	0	2	2	187
05:45 PM	0	0	0	3	3	0	40	13	1	54	13	105	5	1	124	0	0	0	0	0	181
Total	0	0	0	49	49	0	180	84	25	289	63	490	17	15	585	0	0	0	5	5	928
Grand Total	0	0	0	139	139	0	413	156	48	617	165	1081	36	40	1322	0	0	0	9	9	2087
Apprch %	0	0	0	100		0	66.9	25.3	7.8		12.5	81.8	2.7	3		0	0	0	100		
Total %	0	0	0	6.7	6.7	0	19.8	7.5	2.3	29.6	7.9	51.8	1.7	1.9	63.3	0	0	0	0.4	0.4	

	Southbound					Swan Westbound					Elm Northbound					Swan Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	23	23	0	**72**	20	7	99	**29**	156	4	6	195	0	0	0	0	0	**317**
04:45 PM	0	0	0	**30**	**30**	0	59	14	6	79	27	**160**	**5**	**8**	**200**	0	0	0	1	1	310
05:00 PM	0	0	0	23	23	0	64	**32**	**15**	**111**	14	142	3	7	166	0	0	0	**2**	**2**	302
05:15 PM	0	0	0	13	13	0	42	22	5	69	19	144	5	7	175	0	0	0	1	1	258
Total Volume	0	0	0	89	89	0	237	88	33	358	89	602	17	28	736	0	0	0	4	4	1187
% App. Total	0	0	0	100		0	66.2	24.6	9.2		12.1	81.8	2.3	3.8		0	0	0	100		
PHF	.000	.000	.000	.742	.742	.000	.823	.688	.550	.806	.767	.941	.850	.875	.920	.000	.000	.000	.500	.500	.936

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : Sycamore-Elm St-AM
Site Code : 00000000
Start Date : 11/27/2007
Page No : 1

Sycamore & Elm
AM Count

Groups Printed- Unshifted - Bank 1

	Southbound					Sycamore Westbound					Elm St Northbound					Sycamore Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	7	1	1	9	11	282	5	10	308	3	3	0	1	7	324
07:15 AM	0	0	0	0	0	0	11	1	1	13	13	370	8	10	401	5	4	0	1	10	424
07:30 AM	0	0	0	0	0	0	20	3	4	27	30	492	14	6	542	6	7	0	1	14	583
07:45 AM	0	0	0	0	0	0	19	8	1	28	22	494	10	15	541	11	9	0	1	21	590
Total	0	0	0	0	0	0	57	13	7	77	76	1638	37	41	1792	25	23	0	4	52	1921
08:00 AM	0	0	0	0	0	0	32	0	1	33	17	472	12	12	513	11	11	0	1	23	569
08:15 AM	0	0	0	0	0	0	28	2	3	33	36	466	9	10	521	9	14	0	6	29	583
08:30 AM	0	0	0	0	0	0	20	2	2	24	25	388	6	7	426	11	12	0	3	26	476
08:45 AM	0	0	0	0	0	0	12	3	0	15	19	313	7	15	354	4	15	0	2	21	390
Total	0	0	0	0	0	0	92	7	6	105	97	1639	34	44	1814	35	52	0	12	99	2018
Grand Total	0	0	0	0	0	0	149	20	13	182	173	3277	71	85	3606	60	75	0	16	151	3939
Apprch %	0	0	0	0		0	81.9	11	7.1		4.8	90.9	2	2.4		39.7	49.7	0	10.6		
Total %	0	0	0	0	0	0	3.8	0.5	0.3	4.6	4.4	83.2	1.8	2.2	91.5	1.5	1.9	0	0.4	3.8	
Unshifted	0	0	0	0	0	0	149	20	13	182	173	3277	71	85	3606	60	75	0	16	151	3939
% Unshifted	0	0	0	0	0	0	100	100	100	100	100	100	100	100	100	100	100	0	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound					Sycamore Westbound					Elm St Northbound					Sycamore Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	0	20	3	**4**	27	30	492	**14**	6	**542**	6	7	0	1	14	583
07:45 AM	0	0	0	0	0	0	19	**8**	1	28	22	**494**	10	**15**	541	**11**	9	0	1	21	**590**
08:00 AM	0	0	0	0	0	0	**32**	0	1	**33**	17	472	12	12	513	11	11	0	1	23	569
08:15 AM	0	0	0	0	0	0	28	2	3	33	**36**	466	9	10	521	9	**14**	0	**6**	**29**	583
Total Volume	0	0	0	0	0	0	99	13	9	121	105	1924	45	43	2117	37	41	0	9	87	2325
% App. Total	0	0	0	0		0	81.8	10.7	7.4		5	90.9	2.1	2		42.5	47.1	0	10.3		
PHF	.000	.000	.000	.000	.000	.000	.773	.406	.563	.917	.729	.974	.804	.717	.976	.841	.732	.000	.375	.750	.985

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : Sycamore-Elm St-PM
Site Code : 00000000
Start Date : 11/27/2007
Page No : 1

Sycamore & Elm
PM Count

Groups Printed- Unshifted - Bank 1

	Southbound					Sycamore Westbound					Elm St Northbound					Sycamore Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	22	4	2	28	6	290	3	9	308	17	20	0	5	42	378
04:15 PM	0	0	0	0	0	0	14	3	3	20	6	264	7	7	284	17	12	0	5	34	338
04:30 PM	0	0	0	0	0	0	9	2	2	13	12	336	6	3	357	32	19	0	10	61	431
04:45 PM	0	0	0	0	0	0	16	4	2	22	7	361	6	9	383	29	9	0	1	39	444
Total	0	0	0	0	0	0	61	13	9	83	31	1251	22	28	1332	95	60	0	21	176	1591
05:00 PM	0	0	0	0	0	0	9	4	0	13	9	402	10	7	428	24	16	0	1	41	482
05:15 PM	0	0	0	0	0	0	16	3	1	20	9	424	4	2	439	17	11	0	1	29	488
05:30 PM	0	0	0	0	0	0	6	1	0	7	5	335	5	4	349	12	9	0	1	22	378
05:45 PM	0	0	0	0	0	0	9	0	0	9	5	265	3	2	275	16	11	1	1	29	313
Total	0	0	0	0	0	0	40	8	1	49	28	1426	22	15	1491	69	47	1	4	121	1661
Grand Total	0	0	0	0	0	0	101	21	10	132	59	2677	44	43	2823	164	107	1	25	297	3252
Apprch %	0	0	0	0		0	76.5	15.9	7.6		2.1	94.8	1.6	1.5		55.2	36	0.3	8.4		
Total %	0	0	0	0	0	0	3.1	0.6	0.3	4.1	1.8	82.3	1.4	1.3	86.8	5	3.3	0	0.8	9.1	
Unshifted	0	0	0	0	0	0	101	21	10	132	59	2677	44	43	2823	164	107	1	25	297	3252
% Unshifted	0	0	0	0	0	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound					Sycamore Westbound					Elm St Northbound					Sycamore Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	9	2	**2**	13	**12**	336	6	3	357	**32**	**19**	0	**10**	**61**	431
04:45 PM	0	0	0	0	0	0	**16**	**4**	2	**22**	7	361	6	**9**	383	29	9	0	1	39	444
05:00 PM	0	0	0	0	0	0	9	4	0	13	9	402	**10**	7	428	24	16	0	1	41	482
05:15 PM	0	0	0	0	0	0	16	3	1	20	9	**424**	4	2	**439**	17	11	0	1	29	**488**
Total Volume	0	0	0	0	0	0	50	13	5	68	37	1523	26	21	1607	102	55	0	13	170	1845
% App. Total	0	0	0	0		0	73.5	19.1	7.4		2.3	94.8	1.6	1.3		60	32.4	0	7.6		
PHF	.000	.000	.000	.000	.000	.000	.781	.813	.625	.773	.771	.898	.650	.583	.915	.797	.724	.000	.325	.697	.945

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : elm & william am
Site Code : 00000003
Start Date : 9/30/2008
Page No : 1

Elm & William
AM Peak

Groups Printed- Unshifted

	Southbound					William Westbound					Elm Northbound					William Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	13	5	0	18	22	332	1	6	361	1	6	0	10	17	396
07:15 AM	0	0	0	0	0	0	20	4	0	24	23	457	9	1	490	4	7	0	9	20	534
07:30 AM	0	0	0	5	5	0	42	3	0	45	18	540	5	0	563	2	11	0	15	28	641
07:45 AM	0	0	0	2	2	0	63	13	3	79	41	523	4	11	579	2	16	0	11	29	689
Total	0	0	0	7	7	0	138	25	3	166	104	1852	19	18	1993	9	40	0	45	94	2260
08:00 AM	0	0	0	9	9	0	41	11	4	56	45	529	6	6	586	2	11	0	9	22	673
08:15 AM	0	0	0	3	3	0	43	8	2	53	52	504	5	10	571	1	15	0	9	25	652
08:30 AM	1	0	0	5	6	0	24	5	3	32	39	420	5	4	468	0	18	0	10	28	534
08:45 AM	0	0	0	6	6	0	47	11	5	63	37	367	10	9	423	0	13	0	1	14	506
Total	1	0	0	23	24	0	155	35	14	204	173	1820	26	29	2048	3	57	0	29	89	2365
Grand Total	1	0	0	30	31	0	293	60	17	370	277	3672	45	47	4041	12	97	0	74	183	4625
Apprch %	3.2	0	0	96.8		0	79.2	16.2	4.6		6.9	90.9	1.1	1.2		6.6	53	0	40.4		
Total %	0	0	0	0.6	0.7	0	6.3	1.3	0.4	8	6	79.4	1	1	87.4	0.3	2.1	0	1.6	4	

	Southbound					William Westbound					Elm Northbound					William Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	5	5	0	42	3	0	45	18	**540**	5	0	563	**2**	11	0	**15**	28	641
07:45 AM	0	0	0	2	2	0	**63**	**13**	3	**79**	41	523	4	**11**	579	2	**16**	0	11	**29**	**689**
08:00 AM	0	0	0	**9**	**9**	0	41	11	**4**	56	45	529	**6**	6	**586**	2	11	0	9	22	673
08:15 AM	0	0	0	3	3	0	43	8	2	53	**52**	504	5	10	571	1	15	0	9	25	652
Total Volume	0	0	0	19	19	0	189	35	9	233	156	2096	20	27	2299	7	53	0	44	104	2655
% App. Total	0	0	0	100		0	81.1	15	3.9		6.8	91.2	0.9	1.2		6.7	51	0	42.3		
PHF	.000	.000	.000	.528	.528	.000	.750	.673	.563	.737	.750	.970	.833	.614	.981	.875	.828	.000	.733	.897	.963

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : elm & william pm
Site Code : 00000003
Start Date : 9/29/2008
Page No : 1

Elm & William
PM Peak

Groups Printed- Unshifted

	Southbound					William Westbound					Elm Northbound					William Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	21	0	0	21	7	254	4	11	276	0	0	0	0	0	297
04:15 PM	0	0	0	4	4	0	26	3	1	30	9	226	5	4	244	0	0	0	0	0	278
04:30 PM	0	0	0	9	9	0	19	8	0	27	7	307	4	6	324	9	54	0	1	64	424
04:45 PM	0	0	0	5	5	0	22	9	11	42	9	272	2	3	286	3	38	0	2	43	376
Total	0	0	0	18	18	0	88	20	12	120	32	1059	15	24	1130	12	92	0	3	107	1375
05:00 PM	0	0	0	11	11	0	16	5	2	23	5	345	6	11	367	13	52	0	0	65	466
05:15 PM	0	0	0	0	0	0	23	2	0	25	5	346	4	6	361	6	38	0	4	48	434
05:30 PM	0	0	0	2	2	0	24	9	0	33	4	223	0	0	227	2	17	0	0	19	281
05:45 PM	0	0	0	1	1	0	12	4	1	17	9	205	8	1	223	3	14	0	3	20	261
Total	0	0	0	14	14	0	75	20	3	98	23	1119	18	18	1178	24	121	0	7	152	1442
Grand Total	0	0	0	32	32	0	163	40	15	218	55	2178	33	42	2308	36	213	0	10	259	2817
Apprch %	0	0	0	100		0	74.8	18.3	6.9		2.4	94.4	1.4	1.8		13.9	82.2	0	3.9		
Total %	0	0	0	1.1	1.1	0	5.8	1.4	0.5	7.7	2	77.3	1.2	1.5	81.9	1.3	7.6	0	0.4	9.2	

	Southbound					William Westbound					Elm Northbound					William Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	9	9	0	19	8	0	27	7	307	4	6	324	9	**54**	0	1	64	424
04:45 PM	0	0	0	5	5	0	22	**9**	**11**	**42**	**9**	272	2	3	286	3	38	0	2	43	376
05:00 PM	0	0	0	**11**	**11**	0	16	5	2	23	5	345	**6**	**11**	**367**	**13**	52	0	0	**65**	**466**
05:15 PM	0	0	0	0	0	0	**23**	2	0	25	5	**346**	4	6	361	6	38	0	**4**	48	434
Total Volume	0	0	0	25	25	0	80	24	13	117	26	1270	16	26	1338	31	182	0	7	220	1700
% App. Total	0	0	0	100		0	68.4	20.5	11.1		1.9	94.9	1.2	1.9		14.1	82.7	0	3.2		
PHF	.000	.000	.000	.568	.568	.000	.870	.667	.295	.696	.722	.918	.667	.591	.911	.596	.843	.000	.438	.846	.912

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : oak & broadway am
Site Code : 00000000
Start Date : 9/30/2008
Page No : 1

Oak & Broadway
AM Peak

Groups Printed- Unshifted

	Oak Street Southbound					Broadway Street Westbound					Oak Street Northbound					Broadway Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
07:00 AM	5	270	28	11	314	3	30	0	4	37	0	0	0	0	0	0	3	0	1	4	355
07:15 AM	6	340	49	9	404	7	43	0	5	55	0	0	0	0	0	0	8	1	0	9	468
07:30 AM	10	400	61	8	479	13	57	1	5	76	0	0	0	0	0	0	17	0	4	21	576
07:45 AM	14	433	77	18	542	13	60	0	2	75	0	0	0	0	0	0	19	0	4	23	640
Total	35	1443	215	46	1739	36	190	1	16	243	0	0	0	0	0	0	47	1	9	57	2039
08:00 AM	9	431	64	6	510	16	87	0	5	108	0	0	0	0	0	0	19	0	1	20	638
08:15 AM	11	430	94	12	547	15	53	0	3	71	0	0	0	0	0	0	14	0	3	17	635
08:30 AM	13	407	86	10	516	15	57	0	5	77	0	0	0	0	0	0	24	0	1	25	618
08:45 AM	14	386	82	15	497	18	63	0	5	86	0	0	0	0	0	0	20	0	3	23	606
Total	47	1654	326	43	2070	64	260	0	18	342	0	0	0	0	0	0	77	0	8	85	2497
Grand Total	82	3097	541	89	3809	100	450	1	34	585	0	0	0	0	0	0	124	1	17	142	4536
Apprch %	2.2	81.3	14.2	2.3		17.1	76.9	0.2	5.8		0	0	0	0		0	87.3	0.7	12		
Total %	1.8	68.3	11.9	2	84	2.2	9.9	0	0.7	12.9	0	0	0	0	0	0	2.7	0	0.4	3.1	

	Oak Street Southbound					Broadway Street Westbound					Oak Street Northbound					Broadway Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	**14**	**433**	77	**18**	542	13	60	0	2	75	0	0	0	0	0	0	19	0	**4**	23	**640**
08:00 AM	9	431	64	6	510	**16**	**87**	0	**5**	**108**	0	0	0	0	0	0	19	0	1	20	638
08:15 AM	11	430	**94**	12	**547**	15	53	0	3	71	0	0	0	0	0	0	14	0	3	17	635
08:30 AM	13	407	86	10	516	15	57	0	5	77	0	0	0	0	0	0	**24**	0	1	**25**	618
Total Volume	47	1701	321	46	2115	59	257	0	15	331	0	0	0	0	0	0	76	0	9	85	2531
% App. Total	2.2	80.4	15.2	2.2		17.8	77.6	0	4.5		0	0	0	0		0	89.4	0	10.6		
PHF	.839	.982	.854	.639	.967	.922	.739	.000	.750	.766	.000	.000	.000	.000	.000	.000	.792	.000	.563	.850	.989

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : oak & broadway pm
Site Code : 00000000
Start Date : 9/29/2008
Page No : 1

Oak & Broadway
PM Peak

Groups Printed- Unshifted

	Oak Street Southbound					Broadway Street Westbound					Oak Street Northbound					Broadway Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
04:00 PM	10	424	37	7	478	23	25	0	4	52	0	0	0	0	0	0	56	3	2	61	591
04:15 PM	17	376	25	10	428	14	36	0	1	51	0	0	0	0	0	0	60	3	1	64	543
04:30 PM	9	459	14	6	488	21	32	1	1	55	0	0	0	0	0	0	55	1	1	57	600
04:45 PM	13	448	22	9	492	19	25	0	1	45	0	0	0	0	0	0	58	1	1	60	597
Total	49	1707	98	32	1886	77	118	1	7	203	0	0	0	0	0	0	229	8	5	242	2331
05:00 PM	18	401	16	5	440	36	19	0	1	56	0	0	0	0	0	0	58	6	2	66	562
05:15 PM	15	381	13	5	414	8	17	0	0	25	0	0	0	0	0	0	76	3	2	81	520
05:30 PM	4	296	15	5	320	15	19	0	3	37	0	0	0	0	0	0	50	0	1	51	408
05:45 PM	5	235	6	4	250	7	15	0	1	23	0	0	0	0	0	0	43	1	1	45	318
Total	42	1313	50	19	1424	66	70	0	5	141	0	0	0	0	0	0	227	10	6	243	1808
Grand Total	91	3020	148	51	3310	143	188	1	12	344	0	0	0	0	0	0	456	18	11	485	4139
Apprch %	2.7	91.2	4.5	1.5		41.6	54.7	0.3	3.5		0	0	0	0		0	94	3.7	2.3		
Total %	2.2	73	3.6	1.2	80	3.5	4.5	0	0.3	8.3	0	0	0	0	0	0	11	0.4	0.3	11.7	

	Oak Street Southbound					Broadway Street Westbound					Oak Street Northbound					Broadway Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	10	424	**37**	7	478	**23**	25	0	**4**	52	0	0	0	0	0	0	56	**3**	**2**	61	591
04:15 PM	**17**	376	25	**10**	428	14	**36**	0	1	51	0	0	0	0	0	0	**60**	3	1	**64**	543
04:30 PM	9	**459**	14	6	488	21	32	**1**	1	**55**	0	0	0	0	0	0	55	1	1	57	**600**
04:45 PM	13	448	22	9	**492**	19	25	0	1	45	0	0	0	0	0	0	58	1	1	60	597
Total Volume	49	1707	98	32	1886	77	118	1	7	203	0	0	0	0	0	0	229	8	5	242	2331
% App. Total	2.6	90.5	5.2	1.7		37.9	58.1	0.5	3.4		0	0	0	0		0	94.6	3.3	2.1		
PHF	.721	.930	.662	.800	.958	.837	.819	.250	.438	.923	.000	.000	.000	.000	.000	.000	.954	.667	.625	.945	.971

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : AM counts from Oak and Clinton for Oak and Clinton Intersection
Site Code : 00000000
Start Date : 9/30/2008
Page No : 1

Oak & Clinton
AM Peak

Groups Printed- Unshifted

	Oak Street Southbound					Clinton Street Westbound					Oak Street Northbound					Clinton Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
07:00 AM	15	237	6	9	267	1	8	0	0	9	0	0	0	0	0	0	4	1	1	6	282
07:15 AM	17	300	7	17	341	2	10	0	1	13	0	0	0	0	0	0	5	4	2	11	365
07:30 AM	14	367	16	12	409	8	13	0	3	24	0	0	0	0	0	0	8	6	1	15	448
07:45 AM	18	422	19	18	477	4	18	0	0	22	0	0	0	0	0	0	24	8	8	40	539
Total	64	1326	48	56	1494	15	49	0	4	68	0	0	0	0	0	0	41	19	12	72	1634
08:00 AM	9	398	18	7	432	8	40	0	0	48	0	0	0	0	0	0	13	11	4	28	508
08:15 AM	9	415	27	11	462	7	29	0	1	37	0	0	0	0	0	0	27	9	6	42	541
08:30 AM	8	400	24	9	441	9	27	0	2	38	0	0	0	0	0	0	12	11	3	26	505
08:45 AM	13	423	26	16	478	2	23	0	1	26	0	0	0	0	0	0	17	8	1	26	530
Total	39	1636	95	43	1813	26	119	0	4	149	0	0	0	0	0	0	69	39	14	122	2084
Grand Total	103	2962	143	99	3307	41	168	0	8	217	0	0	0	0	0	0	110	58	26	194	3718
Apprch %	3.1	89.6	4.3	3		18.9	77.4	0	3.7		0	0	0	0		0	56.7	29.9	13.4		
Total %	2.8	79.7	3.8	2.7	88.9	1.1	4.5	0	0.2	5.8	0	0	0	0	0	0	3	1.6	0.7	5.2	

	Oak Street Southbound					Clinton Street Westbound					Oak Street Northbound					Clinton Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	**18**	**422**	19	**18**	**477**	4	18	0	0	22	0	0	0	0	0	0	24	8	**8**	40	539
08:00 AM	9	398	18	7	432	8	**40**	0	0	**48**	0	0	0	0	0	0	13	**11**	4	28	508
08:15 AM	9	415	**27**	11	462	7	29	0	1	37	0	0	0	0	0	0	**27**	9	6	**42**	**541**
08:30 AM	8	400	24	9	441	**9**	27	0	**2**	38	0	0	0	0	0	0	12	11	3	26	505
Total Volume	44	1635	88	45	1812	28	114	0	3	145	0	0	0	0	0	0	76	39	21	136	2093
% App. Total	2.4	90.2	4.9	2.5		19.3	78.6	0	2.1		0	0	0	0		0	55.9	28.7	15.4		
PHF	.611	.969	.815	.625	.950	.778	.713	.000	.375	.755	.000	.000	.000	.000	.000	.000	.704	.886	.656	.810	.967

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : PM counts from Oak and Clinton for Oak and Clinton Intersection
Site Code : 00000000
Start Date : 9/29/2008
Page No : 1

Oak & Clinton
PM Peak

Groups Printed- Unshifted

	Oak Street Southbound					Clinton Street Westbound					Oak Street Northbound					Clinton Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
04:00 PM	15	488	3	6	512	8	11	0	0	19	0	0	0	0	0	0	44	32	3	79	610
04:15 PM	9	407	1	5	422	6	12	0	0	18	0	0	0	0	0	0	40	30	4	74	514
04:30 PM	12	493	1	4	510	7	6	0	0	13	0	0	0	0	0	0	50	41	4	95	618
04:45 PM	9	477	3	8	497	5	9	0	0	14	0	0	0	0	0	0	38	34	2	74	585
Total	45	1865	8	23	1941	26	38	0	0	64	0	0	0	0	0	0	172	137	13	322	2327
05:00 PM	9	443	7	4	463	8	12	0	0	20	0	0	0	0	0	0	77	69	2	148	631
05:15 PM	13	370	3	5	391	7	7	0	0	14	0	0	0	0	0	0	60	36	4	100	505
05:30 PM	10	297	1	6	314	4	7	0	0	11	0	0	0	0	0	0	42	38	1	81	406
05:45 PM	6	249	4	4	263	4	4	0	0	8	0	0	0	0	0	0	28	18	1	47	318
Total	38	1359	15	19	1431	23	30	0	0	53	0	0	0	0	0	0	207	161	8	376	1860
Grand Total	83	3224	23	42	3372	49	68	0	0	117	0	0	0	0	0	0	379	298	21	698	4187
Apprch %	2.5	95.6	0.7	1.2		41.9	58.1	0	0		0	0	0	0		0	54.3	42.7	3		
Total %	2	77	0.5	1	80.5	1.2	1.6	0	0	2.8	0	0	0	0	0	0	9.1	7.1	0.5	16.7	

	Oak Street Southbound					Clinton Street Westbound					Oak Street Northbound					Clinton Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	9	407	1	5	422	6	**12**	0	0	18	0	0	0	0	0	0	40	30	**4**	74	514
04:30 PM	**12**	**493**	1	4	**510**	7	6	0	0	13	0	0	0	0	0	0	50	41	4	95	618
04:45 PM	9	477	3	**8**	497	5	9	0	0	14	0	0	0	0	0	0	38	34	2	74	585
05:00 PM	9	443	**7**	4	463	**8**	12	0	0	**20**	0	0	0	0	0	0	**77**	**69**	2	**148**	**631**
Total Volume	39	1820	12	21	1892	26	39	0	0	65	0	0	0	0	0	0	205	174	12	391	2348
% App. Total	2.1	96.2	0.6	1.1		40	60	0	0		0	0	0	0		0	52.4	44.5	3.1		
PHF	.813	.923	.429	.656	.927	.813	.813	.000	.000	.813	.000	.000	.000	.000	.000	.000	.666	.630	.750	.660	.930

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : AM counts from Oak and North Division for Oak and North Division Intersection
Site Code : 00000000
Start Date : 9/30/2008
Page No : 1

Oak & North Division
AM Peak

Groups Printed- Unshifted

	Oak Street Southbound					North Division Street Westbound					Oak Street Northbound					North Division Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	185	53	9	247	2	56	0	1	59	0	0	0	0	0	0	0	0	0	0	306
07:15 AM	0	252	79	9	340	4	69	0	1	74	0	0	0	0	0	0	0	0	0	0	414
07:30 AM	0	313	69	11	393	1	81	0	5	87	0	0	0	0	0	0	0	0	0	0	480
07:45 AM	0	284	101	22	407	5	110	0	3	118	0	0	0	0	0	0	0	0	0	0	525
Total	0	1034	302	51	1387	12	316	0	10	338	0	0	0	0	0	0	0	0	0	0	1725
08:00 AM	0	304	64	8	376	8	111	0	6	125	0	0	0	0	0	0	0	0	0	0	501
08:15 AM	0	265	119	12	396	5	106	0	0	111	0	0	0	0	0	0	0	0	0	0	507
08:30 AM	0	148	49	8	205	4	53	0	1	58	0	0	0	0	0	0	0	0	0	0	263
08:45 AM	0	190	43	14	247	3	68	6	2	79	0	0	0	0	0	0	0	0	0	0	326
Total	0	907	275	42	1224	20	338	6	9	373	0	0	0	0	0	0	0	0	0	0	1597
Grand Total	0	1941	577	93	2611	32	654	6	19	711	0	0	0	0	0	0	0	0	0	0	3322
Apprch %	0	74.3	22.1	3.6		4.5	92	0.8	2.7		0	0	0	0		0	0	0	0		
Total %	0	58.4	17.4	2.8	78.6	1	19.7	0.2	0.6	21.4	0	0	0	0	0	0	0	0	0	0	

	Oak Street Southbound					North Division Street Westbound					Oak Street Northbound					North Division Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	**313**	69	11	393	1	81	0	5	87	0	0	0	0	0	0	0	0	0	0	480
07:45 AM	0	284	101	**22**	**407**	5	110	0	3	118	0	0	0	0	0	0	0	0	0	0	**525**
08:00 AM	0	304	64	8	376	**8**	**111**	0	**6**	**125**	0	0	0	0	0	0	0	0	0	0	501
08:15 AM	0	265	**119**	12	396	5	106	0	0	111	0	0	0	0	0	0	0	0	0	0	507
Total Volume	0	1166	353	53	1572	19	408	0	14	441	0	0	0	0	0	0	0	0	0	0	2013
% App. Total	0	74.2	22.5	3.4		4.3	92.5	0	3.2		0	0	0	0		0	0	0	0		
PHF	.000	.931	.742	.602	.966	.594	.919	.000	.583	.882	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.959

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : PM counts from Oak and North Division for Oak and North Division Intersection
Site Code : 00000000
Start Date : 9/29/2008
Page No : 1

Oak & North Division
PM Peak

Groups Printed- Unshifted

	Oak Street Southbound					North Division Street Westbound					Oak Street Northbound					North Division Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
04:00 PM	0	488	11	9	508	23	13	0	4	40	0	0	0	0	0	0	0	0	0	0	548
04:15 PM	0	410	7	9	426	10	19	0	4	33	0	0	0	0	0	0	0	0	0	0	459
04:30 PM	0	467	1	4	472	18	23	0	1	42	0	0	0	0	0	0	0	0	0	0	514
04:45 PM	0	510	3	10	523	11	17	0	1	29	0	0	0	0	0	0	0	0	0	0	552
Total	0	1875	22	32	1929	62	72	0	10	144	0	0	0	0	0	0	0	0	0	0	2073
05:00 PM	0	488	1	7	496	10	17	0	2	29	0	0	0	0	0	0	0	0	0	0	525
05:15 PM	0	376	4	7	387	8	16	0	3	27	0	0	0	0	0	0	0	0	0	0	414
05:30 PM	0	335	1	9	345	5	8	0	0	13	0	0	0	0	0	0	0	0	0	0	358
05:45 PM	0	181	8	3	192	6	5	0	1	12	0	0	0	0	0	0	0	0	0	0	204
Total	0	1380	14	26	1420	29	46	0	6	81	0	0	0	0	0	0	0	0	0	0	1501
Grand Total	0	3255	36	58	3349	91	118	0	16	225	0	0	0	0	0	0	0	0	0	0	3574
Apprch %	0	97.2	1.1	1.7		40.4	52.4	0	7.1		0	0	0	0		0	0	0	0		
Total %	0	91.1	1	1.6	93.7	2.5	3.3	0	0.4	6.3	0	0	0	0	0	0	0	0	0	0	

	Oak Street Southbound					North Division Street Westbound					Oak Street Northbound					North Division Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	488	**11**	9	508	**23**	13	0	**4**	40	0	0	0	0	0	0	0	0	0	0	548
04:15 PM	0	410	7	9	426	10	19	0	4	33	0	0	0	0	0	0	0	0	0	0	459
04:30 PM	0	467	1	4	472	18	**23**	0	1	**42**	0	0	0	0	0	0	0	0	0	0	514
04:45 PM	0	**510**	3	**10**	**523**	11	17	0	1	29	0	0	0	0	0	0	0	0	0	0	**552**
Total Volume	0	1875	22	32	1929	62	72	0	10	144	0	0	0	0	0	0	0	0	0	0	2073
% App. Total	0	97.2	1.1	1.7		43.1	50	0	6.9		0	0	0	0		0	0	0	0		
PHF	.000	.919	.500	.800	.922	.674	.783	.000	.625	.857	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.939

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : AM counts from Oak and Swan for Oak and Swan Intersection
Site Code : 00000000
Start Date : 9/30/2008
Page No : 1

Oak & Swan
AM Peak

Groups Printed- Unshifted

	Oak Street Southbound					Swan Street Westbound					Oak Street Northbound					Swan Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	124	54	9	187	10	75	0	0	85	0	0	0	0	0	0	0	4	0	4	276
07:15 AM	0	150	83	5	238	7	109	0	1	117	0	0	0	0	0	0	0	18	2	20	375
07:30 AM	0	173	99	7	279	17	146	0	5	168	0	0	0	0	0	0	0	8	0	8	455
07:45 AM	0	194	100	16	310	16	190	0	5	211	0	0	0	0	0	0	0	9	0	9	530
Total	0	641	336	37	1014	50	520	0	11	581	0	0	0	0	0	0	0	39	2	41	1636
08:00 AM	0	203	112	12	327	31	150	0	15	196	0	0	0	0	0	0	0	10	0	10	533
08:15 AM	0	200	116	8	324	15	155	0	4	174	0	0	0	0	0	0	0	6	0	6	504
08:30 AM	0	162	85	11	258	18	160	0	2	180	0	0	0	0	0	0	0	7	0	7	445
08:45 AM	0	125	94	13	232	16	127	0	5	148	0	0	0	0	0	0	0	6	0	6	386
Total	0	690	407	44	1141	80	592	0	26	698	0	0	0	0	0	0	0	29	0	29	1868
Grand Total	0	1331	743	81	2155	130	1112	0	37	1279	0	0	0	0	0	0	0	68	2	70	3504
Apprch %	0	61.8	34.5	3.8		10.2	86.9	0	2.9		0	0	0	0		0	0	97.1	2.9		
Total %	0	38	21.2	2.3	61.5	3.7	31.7	0	1.1	36.5	0	0	0	0	0	0	0	1.9	0.1	2	

	Oak Street Southbound					Swan Street Westbound					Oak Street Northbound					Swan Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	173	99	7	279	17	146	0	5	168	0	0	0	0	0	0	0	8	0	8	455
07:45 AM	0	194	100	**16**	310	16	**190**	0	5	**211**	0	0	0	0	0	0	0	9	0	9	530
08:00 AM	0	**203**	112	12	**327**	**31**	150	0	**15**	196	0	0	0	0	0	0	0	**10**	0	**10**	**533**
08:15 AM	0	200	**116**	8	324	15	155	0	4	174	0	0	0	0	0	0	0	6	0	6	504
Total Volume	0	770	427	43	1240	79	641	0	29	749	0	0	0	0	0	0	0	33	0	33	2022
% App. Total	0	62.1	34.4	3.5		10.5	85.6	0	3.9		0	0	0	0		0	0	100	0		
PHF	.000	.948	.920	.672	.948	.637	.843	.000	.483	.887	.000	.000	.000	.000	.000	.000	.000	.825	.000	.825	.948

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : PM counts from Oak and Swan for Oak and Swan Intersection
Site Code : 00000000
Start Date : 9/29/2008
Page No : 1

Oak & Swan
PM Peak

Groups Printed- Unshifted

	Oak Street Southbound					Swan Street Westbound					Oak Street Northbound					Swan Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
04:00 PM	0	507	23	10	540	43	44	0	7	94	0	0	0	0	0	0	0	76	0	76	710
04:15 PM	0	432	27	6	465	43	30	0	4	77	0	0	0	0	0	0	0	48	0	48	590
04:30 PM	0	532	24	7	563	48	54	0	4	106	0	0	0	0	0	0	0	110	0	110	779
04:45 PM	0	504	34	9	547	43	44	0	2	89	0	0	0	0	0	0	0	64	0	64	700
Total	0	1975	108	32	2115	177	172	0	17	366	0	0	0	0	0	0	0	298	0	298	2779
05:00 PM	0	550	24	3	577	60	27	0	7	94	0	0	0	0	0	0	0	126	0	126	797
05:15 PM	0	452	26	5	483	35	30	0	5	70	0	0	0	0	0	0	0	102	0	102	655
05:30 PM	0	369	13	8	390	25	21	0	1	47	0	0	0	0	0	0	0	82	0	82	519
05:45 PM	0	256	18	1	275	37	23	0	1	61	0	0	0	0	0	0	0	49	0	49	385
Total	0	1627	81	17	1725	157	101	0	14	272	0	0	0	0	0	0	0	359	0	359	2356
Grand Total	0	3602	189	49	3840	334	273	0	31	638	0	0	0	0	0	0	0	657	0	657	5135
Apprch %	0	93.8	4.9	1.3		52.4	42.8	0	4.9		0	0	0	0		0	0	100	0		
Total %	0	70.1	3.7	1	74.8	6.5	5.3	0	0.6	12.4	0	0	0	0	0	0	0	12.8	0	12.8	

	Oak Street Southbound					Swan Street Westbound					Oak Street Northbound					Swan Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	532	24	7	563	48	**54**	0	4	**106**	0	0	0	0	0	0	0	110	0	110	779
04:45 PM	0	504	**34**	**9**	547	43	44	0	2	89	0	0	0	0	0	0	0	64	0	64	700
05:00 PM	0	**550**	24	3	**577**	**60**	27	0	**7**	94	0	0	0	0	0	0	0	**126**	0	**126**	**797**
05:15 PM	0	452	26	5	483	35	30	0	5	70	0	0	0	0	0	0	0	102	0	102	655
Total Volume	0	2038	108	24	2170	186	155	0	18	359	0	0	0	0	0	0	0	402	0	402	2931
% App. Total	0	93.9	5	1.1		51.8	43.2	0	5		0	0	0	0		0	0	100	0		
PHF	.000	.926	.794	.667	.940	.775	.718	.000	.643	.847	.000	.000	.000	.000	.000	.000	.000	.798	.000	.798	.919

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : East Huron-Oak St-AM
Site Code : 00000000
Start Date : 11/27/2007
Page No : 1

Huron & Oak St
AM Count

Groups Printed- Unshifted - Bank 1

	Oak St Southbound					Sycamore Westbound					Northbound					Huron Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
07:00 AM	6	309	9	12	336	6	9	0	1	16	0	0	0	0	0	0	7	4	0	11	363
07:15 AM	6	395	9	10	420	8	20	0	1	29	0	0	0	0	0	0	8	5	1	14	463
07:30 AM	13	412	14	11	450	14	35	0	5	54	0	0	0	0	0	0	6	5	0	11	515
07:45 AM	12	558	25	10	605	9	26	0	2	37	0	0	0	0	0	0	13	13	1	27	669
Total	37	1674	57	43	1811	37	90	0	9	136	0	0	0	0	0	0	34	27	2	63	2010
08:00 AM	9	560	25	10	604	11	52	0	1	64	0	0	0	0	0	0	33	10	0	43	711
08:15 AM	12	541	36	10	599	8	62	0	1	71	0	0	0	0	0	0	12	18	3	33	703
*** BREAK ***																					
08:45 AM	13	469	32	12	526	13	28	0	0	41	0	0	0	0	0	0	21	8	2	31	598
Total	34	1570	93	32	1729	32	142	0	2	176	0	0	0	0	0	0	66	36	5	107	2012
09:00 AM	10	487	19	5	521	14	23	0	13	50	0	0	0	0	0	0	14	12	2	28	599
Grand Total	81	3731	169	80	4061	83	255	0	24	362	0	0	0	0	0	0	114	75	9	198	4621
Apprch %	2	91.9	4.2	2		22.9	70.4	0	6.6		0	0	0	0		0	57.6	37.9	4.5		
Total %	1.8	80.7	3.7	1.7	87.9	1.8	5.5	0	0.5	7.8	0	0	0	0	0	0	2.5	1.6	0.2	4.3	
Unshifted	81	3731	169	80	4061	83	255	0	24	362	0	0	0	0	0	0	114	75	9	198	4621
% Unshifted	100	100	100	100	100	100	100	0	100	100	0	0	0	0	0	0	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Oak St Southbound					Sycamore Westbound					Northbound					Huron Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 09:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	**13**	412	14	**11**	450	**14**	35	0	**5**	54	0	0	0	0	0	0	6	5	0	11	515
07:45 AM	12	558	25	10	**605**	9	26	0	2	37	0	0	0	0	0	0	13	13	1	27	669
08:00 AM	9	**560**	25	10	604	11	52	0	1	64	0	0	0	0	0	0	**33**	10	0	**43**	**711**
08:15 AM	12	541	**36**	10	599	8	**62**	0	1	**71**	0	0	0	0	0	0	12	**18**	**3**	33	703
Total Volume	46	2071	100	41	2258	42	175	0	9	226	0	0	0	0	0	0	64	46	4	114	2598
% App. Total	2	91.7	4.4	1.8		18.6	77.4	0	4		0	0	0	0		0	56.1	40.4	3.5		
PHF	.885	.925	.694	.932	.933	.750	.706	.000	.450	.796	.000	.000	.000	.000	.000	.000	.485	.639	.333	.663	.914

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : East Huron-Oak St-PM
Site Code : 00000000
Start Date : 11/27/2007
Page No : 1

Huron & Oak
PM Count

Groups Printed- Unshifted - Bank 1

	Oak St Southbound					Sycamore Westbound					Northbound					Huron Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
04:00 PM	5	479	9	11	504	12	20	0	3	35	0	0	0	0	0	0	29	30	2	61	600
04:15 PM	4	402	6	4	416	9	10	0	2	21	0	0	0	0	0	0	14	31	1	46	483
04:30 PM	3	456	6	12	477	20	16	0	5	41	0	0	0	0	0	0	28	53	0	81	599
04:45 PM	1	458	2	8	469	21	21	0	2	44	0	0	0	0	0	0	39	43	2	84	597
Total	13	1795	23	35	1866	62	67	0	12	141	0	0	0	0	0	0	110	157	5	272	2279
05:00 PM	8	414	2	6	430	14	17	0	2	33	0	0	0	0	0	0	20	59	1	80	543
05:15 PM	3	379	4	2	388	7	23	0	1	31	0	0	0	0	0	0	23	55	1	79	498
05:30 PM	2	342	3	8	355	8	11	0	0	19	0	0	0	0	0	0	19	32	1	52	426
05:45 PM	4	345	11	10	370	11	4	0	0	15	0	0	0	0	0	0	20	24	1	45	430
Total	17	1480	20	26	1543	40	55	0	3	98	0	0	0	0	0	0	82	170	4	256	1897
Grand Total	30	3275	43	61	3409	102	122	0	15	239	0	0	0	0	0	0	192	327	9	528	4176
Apprch %	0.9	96.1	1.3	1.8		42.7	51	0	6.3		0	0	0	0		0	36.4	61.9	1.7		
Total %	0.7	78.4	1	1.5	81.6	2.4	2.9	0	0.4	5.7	0	0	0	0	0	0	4.6	7.8	0.2	12.6	
Unshifted	30	3275	43	61	3409	102	122	0	15	239	0	0	0	0	0	0	192	327	9	528	4176
% Unshifted	100	100	100	100	100	100	100	0	100	100	0	0	0	0	0	0	100	100	100	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Oak St Southbound					Sycamore Westbound					Northbound					Huron Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	**5**	**479**	**9**	11	**504**	12	20	0	3	35	0	0	0	0	0	0	29	30	**2**	61	**600**
04:15 PM	4	402	6	4	416	9	10	0	2	21	0	0	0	0	0	0	14	31	1	46	483
04:30 PM	3	456	6	**12**	477	20	16	0	**5**	41	0	0	0	0	0	0	28	**53**	0	81	599
04:45 PM	1	458	2	8	469	**21**	**21**	0	2	**44**	0	0	0	0	0	0	**39**	43	2	**84**	597
Total Volume	13	1795	23	35	1866	62	67	0	12	141	0	0	0	0	0	0	110	157	5	272	2279
% App. Total	0.7	96.2	1.2	1.9		44	47.5	0	8.5		0	0	0	0		0	40.4	57.7	1.8		
PHF	.650	.937	.639	.729	.926	.738	.798	.000	.600	.801	.000	.000	.000	.000	.000	.000	.705	.741	.625	.810	.950

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : oak & william am
Site Code : 00000000
Start Date : 9/30/2008
Page No : 1

Oak & William
AM Peak

Groups Printed- Unshifted

	Oak Street Southbound					William Street Westbound					Oak Street Northbound					William Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
07:15 AM	9	319	1	15	344	4	23	0	2	29	0	0	0	0	0	0	6	3	1	10	383
07:30 AM	10	380	0	11	401	5	38	0	7	50	0	0	0	0	0	0	8	1	1	10	461
07:45 AM	17	453	0	16	486	11	59	0	8	78	0	0	0	0	0	0	8	2	4	14	578
Total	36	1152	1	42	1231	20	120	0	17	157	0	0	0	0	0	0	22	6	6	34	1422
08:00 AM	22	417	2	11	452	3	64	0	2	69	0	0	0	0	0	0	4	1	2	7	528
08:15 AM	13	434	1	13	461	12	49	0	1	62	0	0	0	0	0	0	6	2	2	10	533
08:30 AM	24	429	0	12	465	10	64	0	5	79	0	0	0	0	0	0	13	6	3	22	566
08:45 AM	15	425	1	15	456	4	62	0	3	69	0	0	0	0	0	0	10	6	4	20	545
Total	74	1705	4	51	1834	29	239	0	11	279	0	0	0	0	0	0	33	15	11	59	2172
09:00 AM	12	323	2	17	354	10	45	1	5	61	0	0	0	0	0	0	14	9	3	26	441
Grand Total	122	3180	7	110	3419	59	404	1	33	497	0	0	0	0	0	0	69	30	20	119	4035
Apprch %	3.6	93	0.2	3.2		11.9	81.3	0.2	6.6		0	0	0	0		0	58	25.2	16.8		
Total %	3	78.8	0.2	2.7	84.7	1.5	10	0	0.8	12.3	0	0	0	0	0	0	1.7	0.7	0.5	2.9	

	Oak Street Southbound					William Street Westbound					Oak Street Northbound					William Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 09:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	17	**453**	0	**16**	**486**	11	59	0	**8**	78	0	0	0	0	0	0	8	2	**4**	14	**578**
08:00 AM	22	417	**2**	11	452	3	**64**	0	2	69	0	0	0	0	0	0	4	1	2	7	528
08:15 AM	13	434	1	13	461	**12**	49	0	1	62	0	0	0	0	0	0	6	2	2	10	533
08:30 AM	**24**	429	0	12	465	10	64	0	5	**79**	0	0	0	0	0	0	**13**	**6**	3	**22**	566
Total Volume	76	1733	3	52	1864	36	236	0	16	288	0	0	0	0	0	0	31	11	11	53	2205
% App. Total	4.1	93	0.2	2.8		12.5	81.9	0	5.6		0	0	0	0		0	58.5	20.8	20.8		
PHF	.792	.956	.375	.813	.959	.750	.922	.000	.500	.911	.000	.000	.000	.000	.000	.000	.596	.458	.688	.602	.954

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : oak & william pm
Site Code : 00000000
Start Date : 9/29/2008
Page No : 1

Oak & William
PM Peak

Groups Printed- Unshifted

	Oak Street Southbound					William Street Westbound					Oak Street Northbound					William Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
04:00 PM	11	401	2	10	424	30	26	0	2	58	0	0	0	0	0	0	14	14	0	28	510
04:15 PM	10	405	4	9	428	15	29	0	5	49	0	0	0	0	0	0	12	7	2	21	498
04:30 PM	9	437	3	7	456	28	33	0	3	64	0	0	0	0	0	0	15	10	2	27	547
04:45 PM	11	467	1	6	485	16	25	0	2	43	0	0	0	0	0	0	11	14	1	26	554
Total	41	1710	10	32	1793	89	113	0	12	214	0	0	0	0	0	0	52	45	5	102	2109
05:00 PM	15	451	0	8	474	15	21	0	4	40	0	0	0	0	0	0	15	13	0	28	542
05:15 PM	19	376	1	3	399	12	22	0	2	36	0	0	0	0	0	2	22	19	1	44	479
05:30 PM	12	326	2	8	348	12	21	0	5	38	0	0	0	0	0	0	8	10	2	20	406
05:45 PM	5	242	0	5	252	13	23	0	3	39	0	0	0	0	0	0	8	8	0	16	307
Total	51	1395	3	24	1473	52	87	0	14	153	0	0	0	0	0	2	53	50	3	108	1734
Grand Total	92	3105	13	56	3266	141	200	0	26	367	0	0	0	0	0	2	105	95	8	210	3843
Apprch %	2.8	95.1	0.4	1.7		38.4	54.5	0	7.1		0	0	0	0		1	50	45.2	3.8		
Total %	2.4	80.8	0.3	1.5	85	3.7	5.2	0	0.7	9.5	0	0	0	0	0	0.1	2.7	2.5	0.2	5.5	

	Oak Street Southbound					William Street Westbound					Oak Street Northbound					William Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	10	405	**4**	**9**	428	15	29	0	**5**	49	0	0	0	0	0	0	12	7	**2**	21	498
04:30 PM	9	437	3	7	456	**28**	**33**	0	3	**64**	0	0	0	0	0	0	**15**	10	2	27	547
04:45 PM	11	**467**	1	6	**485**	16	25	0	2	43	0	0	0	0	0	0	11	**14**	1	26	**554**
05:00 PM	**15**	451	0	8	474	15	21	0	4	40	0	0	0	0	0	0	15	13	0	**28**	542
Total Volume	45	1760	8	30	1843	74	108	0	14	196	0	0	0	0	0	0	53	44	5	102	2141
% App. Total	2.4	95.5	0.4	1.6		37.8	55.1	0	7.1		0	0	0	0		0	52	43.1	4.9		
PHF	.750	.942	.500	.833	.950	.661	.818	.000	.700	.766	.000	.000	.000	.000	.000	.000	.883	.786	.625	.911	.966

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : AM counts from South Division for Oak and South Division Intersection
Site Code : 00000000
Start Date : 9/30/2008
Page No : 1

South Division @ Oak
AM peak

Groups Printed- Unshifted

	Oak Street Southbound					South Division Street Westbound					Oak Street Northbound					South Division Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	7	2	37	37
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	5	3	48	48
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	12	5	55	55
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	27	6	83	83
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	51	16	223	223
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	15	9	89	89
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	21	3	65	65
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	8	3	58	58
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	11	4	69	69
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	207	55	19	281	281
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	363	106	35	504	504
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	72	21	6.9		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72	21	6.9	100	

	Oak Street Southbound					South Division Street Westbound					Oak Street Northbound					South Division Street Eastbound					
Start Time	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	**27**	6	83	83
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**65**	15	**9**	**89**	**89**
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41	21	3	65	65
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	8	3	58	58
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	203	71	21	295	295
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	68.8	24.1	7.1		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.781	.657	.583	.829	.829

C&S Engineers, Inc.

499 Col. Eileen Collins Blvd.
Syracuse, NY 12041

File Name : PM counts from South Division for Oak and South Division Intersection
Site Code : 00000000
Start Date : 9/29/2008
Page No : 1

South Division @ Oak
PM Peak

Groups Printed- Unshifted

	Oak Street Southbound					South Division Street Westbound					Oak Street Northbound					South Division Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	87	5	205	205
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	91	61	6	158	158
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144	84	3	231	231
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	81	4	207	207
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	470	313	18	801	801
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	169	106	3	278	278
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	106	3	265	265
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105	85	4	194	194
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94	47	2	143	143
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	524	344	12	880	880
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	994	657	30	1681	1681
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	59.1	39.1	1.8		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59.1	39.1	1.8	100	

	Oak Street Southbound					South Division Street Westbound					Oak Street Northbound					South Division Street Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Hev Veh	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	144	84	3	231	231
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	122	81	**4**	207	207
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**169**	**106**	3	**278**	**278**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	156	106	3	265	265
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	591	377	13	981	981
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	60.2	38.4	1.3		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.874	.889	.813	.882	.882

Appendix D

LOS & Queue Analysis Reports

Existing

No-Build

Build

Mitigation

BNMC DGEIS TIS **AM Peak Hour Operations Summary - Signalized**

	Existing		No Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Main Street/Best Street	B	16.3	B	16.6	B	16.4			B	16.3		
Best EB left/thru/right	C	29.7	C	30.2	C	29.8			C	30.2		
Best WB left/thru/right	C	30.9	C	31.4	C	31.3			C	31.4		
Main NB left/thru | thru | thru/right	B	16.3	B	16.8	B	17.2			B	17.0		
Main SB left/thru | thru | thru/right	A	4.3	A	4.6	A	4.7			A	4.6		
Main Street/North Street	B	12.9	B	12.9	B	14.7			B	14.6		
North EB left/thru/right	C	23.8	C	23.8	C	26.1			C	26.0		
North WB left/thru/right	C	22.4	C	22.4	C	22.0			C	21.8		
Main NB left/thru | thru | thru/right	A	4.5	A	4.5	A	5.6			A	5.7		
Main SB left/thru | thru | thru/right	B	10.3	B	10.3	B	12.4			B	12.4		
Main Street/High Street	A	5.2	A	5.2	A	5.7			A	5.8		
High WB left/right	B	15.4	B	15.4	B	16.2			B	15.8		
Main NB thru | thru | thru/right	A	6.3	A	6.4	A	6.7			A	6.7		
Main SB left/thru | thru | thru	A	2.1	A	2.1	A	2.4			A	2.4		
Main Street/Allen Street	A	7.6	B	12.5	B	13.0			B	13.0		
Allen EB left/right	B	12.6	A	5.7	A	9.3			A	9.3		
Allen WB left/thru/right			A	9.4	A	9.4			A	9.4		
Main NB left/thru | thru | thru	A	6.2	B	14.3	B	14.3			B	14.3		
Main SB thru | thru | thru/right	A	6.0	B	14.8	B	14.6			B	14.6		
Main Street/Virginia Street	A	5.0	A	4.9	A	4.9			A	4.9		
Virginia EB left/thru/right	C	20.5	C	20.1	C	20.1			C	20.1		
Virginia WB left/thru/right	B	18.0	B	16.2	B	16.2			B	16.2		
Main NB left/thru | thru | thru/right	A	2.5	A	2.5	A	2.5			A	2.5		
Main SB left/thru | thru | thru/right	A	2.1	A	2.1	A	2.1			A	2.1		
Main Street/Goodell Street	C	22.7	C	25.9	C	26.1	B	17.4	C	25.9	B	16.5
Goodell WB left/thru | thru | thru	A	5.9	A	5.9	A	6.2	B	13.8	A	5.8	B	12.5
Goodell WB right	A	5.7	A	5.7	A	6.0	B	12.9	A	5.6	B	11.6
Main NB left/thru	F	83.3	F	100.9	F	100.9	C	32.7	F	100.9	C	32.7
Main SB soft right | soft right	C	28.0	C	28.4	C	28.4	B	18.7	C	28.4	B	18.7
Main SB right	A	6.6	A	6.5	A	6.5	A	4.3	A	6.5	A	4.3
Washington Street/Goodell Street	A	5.2	A	5.2	A	5.7			A	5.6		
Goodell WB left/thru | thru | thru | thru/right	A	1.2	A	1.5	A	1.7			A	1.6		
Washington NB left/thru	B	17.4	B	18.2	B	17.0			B	17.0		
Washington SB thru	C	20.0	B	19.4	B	19.8			B	19.8		
Washington SB right	A	6.4	A	7.0	A	7.0			A	7.0		
Washington Street/Tupper Street	B	11.7	B	10.4	B	11.5			B	11.5		
Tupper EB left/thru | thru | thru/right	A	0.3	A	0.3	A	0.3			A	0.3		
Washington NB thru	B	19.3	B	19.3	C	20.4			C	20.4		
Washington NB right	A	6.3	A	6.3	A	6.3			A	6.3		
Washington SB left	C	26.8	C	25.0	C	26.4			C	26.5		
Washington SB thru	C	29.1	C	26.9	C	27.9			C	28.1		
Ellicott Street/Best Street	A	7.0	A	7.0	A	7.0			A	7.0		
Best EB left/thru	A	8.0	A	8.0	A	8.0			A	8.0		
Best WB thru/right	A	6.9	A	7.0	A	7.0			A	7.0		
Ellicott NB left/thru | thru/right	A	5.6	A	5.6	A	5.6			A	5.6		

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	Existing		No Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Ellicott Street/High Street	A	8.7	B	10.2	D	38.5	B	18.5	B	13.3		
High EB left/thru	B	14.7	B	11.9	B	12.0	B	17.1	B	13.5		
High WB thru/right	B	13.2	B	11.9	B	14.5	C	22.0	B	14.8		
Ellicott NB left/thru I thru/right	A	4.3	A	9.1	E	59.4	C	20.5	B	13.4		
Ellicott SB left/thru/right			A	7.8	A	9.5	A	8.5	A	8.1		
Ellicott Street/Goodell Street	B	12.9	B	14.1	D	36.8			B	16.8		
Goodell WB left/thru I thru I thru I thru/right	B	12.6	B	13.5	D	39.8			B	16.6		
Ellicott NB left/thru	B	15.8	B	16.6	B	16.6			B	16.7		
Ellicott SB thru/right			B	19.4	C	22.7			B	19.9		
Ellicott Street/Tupper Street	A	9.9	B	10.9	B	14.4			B	12.3		
Tupper EB left/thru I thru I thru/right	A	7.2	A	7.1	A	7.0			A	7.0		
Ellicott NB thru/right I right	C	21.4	C	21.7	C	23.1			C	24.2		
Ellicott NB right	A	5.7	A	5.6	A	5.6			A	5.6		
Ellicott SB left/thru I thru	B	13.5	B	16.7	C	26.9			B	18.5		
Elm Street/Tupper Street	B	17.9	B	18.0	C	24.4			C	26.1		
Tupper EB thru I thru	A	2.1	A	2.9	A	3.4			A	2.8		
Elm NB thru I thru/right	C	30.1	C	30.9	D	41.4			D	41.4		
Elm Street/Genesee Street	C	21.6	C	22.0	C	23.0			C	23.0		
Genesee EB left/thru I thru	D	36.0	D	36.1	D	36.1			D	36.1		
Genesee WB thru I thru/right	C	31.2	C	31.3	C	31.8			C	31.8		
Elm NB left/thru I thru I thru	C	21.2	C	21.8	C	23.0			C	23.0		
Elm NB right	A	4.9	A	4.5	A	3.9			A	3.9		
Elm Street/Sycamore Street	A	5.6	A	5.8	A	6.0			A	6.0		
Sycamore EB left/thru	D	38.8	D	39.3	D	39.3			D	39.3		
Sycamore WB thru/right	D	37.7	D	38.0	D	38.0			D	38.0		
Elm NB left/thru I thru I thru/right	A	2.5	A	2.6	A	3.0			A	3.0		
Elm Street/Broadway Street	A	6.9	A	7.0	A	7.0			A	7.0		
Broadway EB left/thru I thru	C	33.3	C	33.4	C	33.4			C	33.4		
Broadway WB thru I thru/right	C	33.4	C	33.8	C	34.1			C	34.1		
Elm NB left/thru I thru I thru/right	A	2.5	A	2.6	A	2.9			A	2.9		
Elm Street/William Street	A	6.2	A	6.4	A	6.5			A	6.5		
William EB left/thru I thru	D	35.4	D	35.4	D	35.4			D	35.4		
William WB thru I thru/right	D	36.3	D	37.0	D	37.5			D	37.5		
Elm NB left/thru I thru I thru/right	A	2.5	A	2.7	A	2.9			A	2.9		
Elm Street/Clinton Street	A	6.3	A	6.4	A	6.3			A	6.3		
Clinton EB left/thru	C	34.9	D	35.3	D	35.3			D	35.3		
Clinton WB thru/right	C	34.6	D	35.3	D	35.7			D	35.7		
Elm NB left/thru I thru I thru/right	A	2.4	A	2.5	A	2.6			A	2.6		
Elm Street/North Division Street	A	6.9	A	8.1	B	12.2			B	12.2		
North Division WB thru I thru/right	C	32.2	C	32.8	C	33.4			C	33.4		
Elm NB left/thru I thru I thru	A	5.4	A	6.7	B	11.1			B	11.1		
Elm Street/South Division Street	A	8.5	B	15.6	C	34.6			C	34.6		
South Division EB left	D	44.6	D	46.3	D	46.6			D	46.6		
South Division EB left/thru I thru	D	42.5	D	43.4	D	43.6			D	43.6		
Elm NB thru I thru I thru/right	A	4.0	B	11.7	C	33.3			C	33.3		

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	Existing		No Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Elm Street/Swan Street	C	30.0	D	44.9	E	66.4			E	66.4		
Swan WB thru/right	E	58.2	E	65.5	E	65.5			E	65.5		
Elm NB left	A	4.8	A	5.5	A	5.5			A	5.5		
Elm NB left/thru I thru I thru/right	C	30.9	D	49.0	E	75.8			E	75.8		
Oak Street/Goodell Street	B	12.4	B	12.9	B	16.5			B	14.1		
Goodell WB left/thru I thru I thru I thru/right	B	12.2	B	12.7	B	16.2			B	13.8		
Oak SB thru/right	C	20.3	C	20.6	C	23.6			C	22.4		
Oak Street/Tupper Street	A	4.8	A	5.4	A	7.8			A	7.0		
Tupper EB thru I thru	A	2.0	A	3.3	A	5.9			A	3.4		
Tupper EB right	A	0.7	A	0.6	A	0.8			A	0.6		
Oak SB left/thru I thru	B	17.8	B	17.9	B	17.4			C	20.6		
Oak Street/Genesee Street	B	10.6	B	11.0	B	11.1			B	11.0		
Genesee EB thru I thru/right	C	21.2	C	22.1	C	22.5			C	22.5		
Genesee WB left/thru I thru	C	28.0	C	28.4	C	28.4			C	28.4		
Oak SB left/thru I thru I thru	A	8.6	A	8.9	A	9.0			A	8.9		
Oak SB right	A	2.7	A	3.2	A	3.1			A	3.1		
Oak Street/Sycamore Street	A	8.7	A	9.2	A	9.3			A	9.2		
Sycamore EB thru/right	C	24.2	C	25.0	C	25.2			C	25.2		
Sycamore WB left/thru	C	33.0	C	33.9	C	33.9			C	33.9		
Oak SB left/thru I thru I thru/right	A	5.5	A	6.0	A	6.1			A	6.1		
Oak Street/Broadway Street	A	8.7	A	9.8	B	10.7			B	10.7		
Broadway EB thru I thru/right	B	18.1	B	18.1	B	18.1			B	18.1		
Broadway WB left/thru I thru	C	20.6	C	20.8	C	20.8			C	20.8		
Oak SB left/thru I thru I thru/right	A	6.1	A	7.8	A	8.9			A	9.0		
Oak Street/William Street	A	5.2	A	5.6	A	5.7			A	5.7		
William EB thru I thru/right	B	17.7	B	18.4	B	18.4			B	18.4		
William WB left/thru I thru	C	25.1	C	25.5	C	25.5			C	25.5		
Oak SB left/thru I thru I thru/right	A	1.9	A	2.3	A	2.5			A	2.5		
Oak Street/Clinton Street	A	4.8	A	5.0	A	5.1			A	5.1		
Clinton EB thru/right	B	17.3	B	17.9	B	18.0			B	18.0		
Clinton WB left/thru	B	19.8	B	20.0	B	20.0			B	20.0		
Oak SB left/thru I thru I thru/right	A	2.8	A	3.0	A	3.1			A	3.1		
Oak Street/North Division Street	A	5.5	A	8.8	A	5.8			A	5.8		
North Division WB left/thru I thru I thru	B	17.8	B	17.9	B	17.9			B	17.9		
Oak SB thru I thru I thru/right	A	2.0	A	6.2	A	2.5			A	2.5		
Oak Street/South Division Street	A	4.1	A	5.3	A	4.2			A	4.2		
South Division EB thru I thru I thru	B	17.1	B	17.2	B	17.2			B	17.2		
South Division EB right	A	6.9	A	8.4	A	9.6			A	9.6		
Oak SB left/thru I thru I thru I thru	A	1.7	A	3.1	A	1.7			A	1.7		
Oak Street/Swan Street	B	10.6	B	13.9	B	11.4			B	11.4		
Swan EB right I right	A	1.7	A	3.2	A	4.2			A	4.2		
Swan WB left	A	8.8	A	9.6	B	10.2			B	10.2		
Swan WB thru I thru	B	16.7	B	17.1	B	17.1			B	17.1		
Oak SB thru I thru I thru I thru/right	A	7.5	B	12.7	A	8.6			A	8.6		
Michigan Avenue/Best Street	B	11.5	B	11.8	B	11.7			B	11.7		

BNMC DGEIS TIS **AM Peak Hour Operations Summary - Signalized**

	Existing		No Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Best EB left/thru/right	B	14.5	B	14.9	B	14.9			B	14.9		
Best WB left/thru/right	B	14.9	B	15.1	B	15.1			B	15.1		
Michigan NB left/thru/right	A	7.1	A	7.2	A	7.5			A	7.5		
Michigan SB left/thru/right	A	8.0	A	8.1	A	8.6			A	8.6		
Michigan Avenue/North Street	B	17.5	B	18.3	C	21.5			C	28.1	C	21.2
North EB left/thru/right	B	16.1	B	18.5	B	19.8			B	15.9	B	14.4
North WB left/thru/right	D	39.5	D	40.6	D	48.5			E	70.1	D	49.0
Michigan NB left/thru	A	4.2	A	4.3	A	4.5			A	4.5	A	5.3
Michigan NB right	A	1.7	A	1.7	A	1.6			A	1.4	A	1.7
Michigan SB left/thru/right	A	4.2	A	4.4	A	4.9			A	4.9	A	5.7
Michigan Avenue/High Street	A	6.9	A	7.1	A	8.6			B	17.4		
High EB left/thru/right	B	10.4	B	12.4	B	12.0			C	32.0		
High WB left/thru/right	B	12.6	B	12.9	B	12.9			B	13.0		
Michigan NB left/thru/right	A	7.7	A	7.8	B	11.4			C	21.8		
Michigan SB left/thru | thru/right	A	4.3	A	4.2	A	3.9			A	4.2		
Michigan Avenue/Carlton Street	A	8.4	A	7.9	A	8.1			B	13.6		
Carlton EB left/thru/right	B	13.0	B	13.9	B	13.9			B	13.9		
Carlton WB left/thru/right	B	17.5	B	16.9	B	16.9			B	16.9		
Michigan NB left/thru/right	A	3.9	A	4.1	A	4.8			B	13.0		
Michigan SB left/thru/right	B	12.2	B	11.4	B	11.7			B	14.5		
Michigan Avenue/Virginia Street	B	17.6	C	20.2	C	32.3			F	125.6	D	40.0
Virginia EB left/thru/right	A	8.5	B	10.3	B	10.3			B	10.3	C	27.0
Michigan NB left/thru/right	C	23.3	C	25.8	D	42.1			F	170.6	D	52.9
Michigan SB left/thru/right	A	6.3	A	5.8	A	5.9			A	6.9	A	3.4
Michigan Avenue/Goodell Street	C	20.7	C	21.6	C	29.0			C	30.4		
Goodell WB left/thru | thru | thru | thru/right	B	17.5	B	19.0	C	28.0			C	29.0		
Michigan NB left	B	19.4	B	19.3	B	19.5			B	19.8		
Michigan NB thru	C	30.6	C	32.6	D	36.4			D	37.1		
Michigan SB thru | thru/right	C	31.5	C	28.9	C	29.7			C	34.5		
Michigan Avenue/Genesee Street	B	10.0	B	10.1	B	10.2			B	10.2		
Genesee EB left/thru | thru/right	B	10.5	B	10.7	B	10.7			B	10.7		
Genesee WB left/thru/right	B	10.4	B	10.8	B	10.8			B	10.8		
Michigan NB left/thru | thru/right	A	9.9	B	10.0	B	10.3			B	10.3		
Michigan SB left/thru | thru/right	A	9.6	A	9.0	A	9.2			A	9.2		

BNMC DGEIS TIS **AM Peak Hour Operations Summary - Unsignalized**

	Existing		No Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Main Street/Goodrich Street												
CMHC Driveway EB left/thru/right					b	11.7			b	11.7		
Goodrich WB left/right	b	10.7	b	10.8	b	11.4			b	11.5		
Main NB thru | thru | thru/right	a	0	a	0	a	0.6			a	0.6		
Main SB left/thru | thru | thru	a	3.3	a	3.4	a	0.1			a	0.1		
Main Street/Carlton Street												
Carlton WB left/right	b	10.7	b	10.6	b	10.6			b	10.6		
Main NB thru | thru | thru/right	a	0	a	0	a	0.0			a	0.0		
Main SB left/thru | thru | thru	a	2	a	2.1	a	2.1			a	2.1		
Washington Street/High Street												
High EB thru/right	a	0	a	0	a	0.0			a	0.0		
High WB left/thru	a	2.5	a	2.6	a	2.7			a	2.5		
Washington NB left/right	a	9.2	a	9.1	a	9.7			a	9.7		
Washington Street/Allen Street												
Allen EB left/thru/right			a	7.2	a	7.4			a	7.4		
Allen WB left/thru/right			a	7.2	a	7.4			a	7.4		
Washington NB left/thru/right			a	7.4	a	7.8			a	7.8		
Washington SB left/thru | thru/right			a	6.6	a	6.7			a	6.7		
Washington Street/Carlton Street												
Carlton EB left/thru/right	a	8.3	a	8.7	a	9.0			a	9.0		
Carlton WB left/thru/right	a	8.4	a	8.6	a	8.8			a	8.8		
Washington NB left/thru/right	a	8.2	a	8.3	a	8.9			a	8.9		
Washington SB left/thru | thru/right	a	7.5	a	7.5	a	7.7			a	7.7		
Ellicott Street/North Street												
North EB left/thru	a	8.3	a	8.3	a	8.9			a	8.8		
North WB thru/right	a	8.8	a	8.8	b	10.3			a	9.4		
Ellicott NB left/thru | thru/right	a	7.7	a	8.5	a	9.3			a	9.0		
Ellicott Street/Goodrich Street												
Goodrich EB left/thru	a	8.2	a	8.4	a	8.3			a	8.0		
Goodrich WB thru/right	a	7.9	a	8.4								
Ellicott NB left/thru | thru/right	a	7.7	b	9.3	a	8.9			a	8.6		
Ellicott SB left/thru/right			a	7.9	a	8.2			a	7.6		
Ellicott Street/Allen Street												
Allen EB left/right			b	10.5	c	19.8			b	12.9		
Ellicott NB left/thru			a	0	a	0.1			a	0.1		
Ellicott SB thru/right			a	0.2	a	0.0			a	0.0		
Ellicott Street/Carlton Street							B	15.2				
Carlton EB left/thru	a	8.9	a	9.7	b	12.5	B	16.4	b	11.4		
Carlton WB thru/right	a	8.4	a	9.3	b	11.7	B	15.1	b	10.8		
Ellicott NB left/thru | thru/right	a	8.5	b	12.1	f	197.5	B	18.0	d	28.7		
Ellicott SB left/thru/right			a	9.0	b	14.6	A	5.9	b	10.9		
Ellicott Street/Virginia Street												
Virginia WB right	a	9.7	b	11.7					c	15.1		
Ellicott NB thru | thru/right	a	0	a	0					a	0.0		
Ellicott SB left/thru			a	0.4					a	0.3		
Ellicott Street/Oak Street												
Ellicott NB thru | thru/right	a	0	a	0	a	0.0			a	0.0		
Ellicott SB left/thru			a	0.3	a	4.1			a	3.1		
North Oak WB right	b	10.3	b	11.5	d	25.0			b	14.9		

BNMC DGEIS TIS **AM Peak Hour Operations Summary - Unsignalized**

	Existing		No Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Michigan Avenue/Goodrich Street												
Goodrich EB left/right	b	13.0	b	13.5	c	23.2			f	Err		
SNF Driveway WB left/thru/right					c	18.4			f	Err		
Michigan NB left/thru	a	4.1	a	4.2	a	4.3			c	17.1		
Michigan SB thru/right	a	0	a	0	a	0.3			a	0.1		
Michigan Avenue/Cherry Street												
Michigan NB thru I thru/right	a	0	a	0	a	0.0			a	0.0		
Michigan SB right/thru I thru	a	5	a	5.5	a	2.8			b	4.2		
Elm Street/Virginia Street												
Virginia EB left/thru	a	3.4	a	3.2	a	3.2			a	3.2		
Virginia WB thru/right	a	0	a	0	a	0.0			a	0.0		
Elm SB left/right	b	10.1	b	10.2	b	10.2			b	10.2		
Elm Street/Carlton Street												
Carlton EB thru/right	a	7.8	a	7.9	a	7.9			a	7.9		
Carlton WB left/thru	a	7.6	a	7.7	a	7.7			a	7.7		
Elm NB left/right	a	7.2	a	7.2	a	7.2			a	7.2		
Elm Street/Goodell Street												
Goodell WB thru I thru I thru I thru	a	0	a	0	a	0.0			a	0.0		
Elm NB left I left	b	12.4	b	13.3	c	22.6			c	22.7		
High Street/Structure Driveway												
High EB shared left/thru					a	5.3			a	2.2		
High WB shared thru/right					a	0.0			a	0.0		
Driveway SB shared left/right					a	10.0			a	0.0		
Ellicott Street/Structure Driveway												
Driveway EB shared left/right					e	42.2			a	0.0		
Ellicott NB shared left/thru					a	7.7			a	2.7		
Ellicott SB shared thru/right					a	0.0			a	0.0		

BNMC DGEIS TIS **PM Peak Hour Operations Summary - Signalized**

	Existing		No-Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Main Street/Best Street	B	17.6	B	17.8	B	17.8			B	17.8		
Best EB left/thru/right	C	27.9	C	27.9	C	28.1			C	28.1		
Best WB left/thru/right	C	30.2	C	30.5	C	30.5			C	30.5		
Main NB left/thru | thru | thru/right	B	16.6	B	17.0	B	17.4			B	17.4		
Main SB left/thru | thru | thru/right	A	4.7	A	5.0	A	5.1			A	5.1		
Main Street/North Street	B	12.6	B	13.2	B	14.8			B	14.0		
North EB left/thru/right	C	27.7	C	29.0	C	31.5			C	30.4		
North WB left/thru/right	C	22.5	C	22.8	C	25.4			C	23.8		
Main NB left/thru | thru | thru/right	A	4.3	A	4.7	A	5.2			A	5.2		
Main SB left/thru | thru | thru/right	B	11.1	B	11.8	B	12.9			B	12.8		
Main Street/High Street	A	6.4	A	6.5	B	10.9			B	11.4		
High WB left/right	B	15.7	B	15.8	C	24.6			C	24.9		
Main NB thru | thru | thru/right	A	7.4	A	7.5	B	10.0			B	10.3		
Main SB left/thru | thru | thru	A	2.9	A	3.0	A	5.3			A	5.5		
Main Street/Allen Street	A	7.0	B	11.1	B	10.9			B	10.9		
Allen EB left/right	B	10.3	A	7.3	A	9.2			A	9.2		
Main NB left/thru | thru | thru	A	6.8	B	12.2	B	12.2			B	12.2		
Main SB thru | thru | thru/right	A	5.8	B	12.2	B	12.3			B	12.3		
Main SB left/thru | thru | thru/right			B	10.9	A	9.5			A	9.5		
Main Street/Virginia Street	A	8.4	A	8.6	A	8.6			A	8.6		
Virginia EB left/thru/right	B	11.4	B	11.5	B	11.5			B	11.5		
Virginia WB left/thru/right	B	12.8	B	12.6	B	12.6			B	12.6		
Main NB left/thru | thru | thru/right	A	7.1	A	7.2	A	7.2			A	7.2		
Main SB left/thru | thru | thru/right	A	7.8	A	8.0	A	8.0			A	8.0		
Main Street/Goodell Street	B	15.8	B	15.8	B	15.9			B	15.9		
Goodell WB left/thru | thru | thru	A	9.8	A	9.5	A	9.7			A	9.6		
Goodell WB right	A	8.8	A	8.5	A	8.6			A	8.5		
Main NB left/thru	B	16.9	B	16.8	B	16.8			B	16.8		
Main SB soft right I soft right/right	C	28.3	C	29.0	C	29.0			C	29.0		
Washington Street/Goodell Street	C	33.0	C	27.7	D	48.7	B	12.6	D	48.6	B	13.6
Goodell WB left/thru | thru | thru | thru/right	A	2.8	A	3.7	A	4.0	A	5.3	A	3.9	A	7.5
Washington NB left/thru	F	84.0	E	65.9	F	127.6	C	20.1	F	127.6	C	20.1
Washington SB thru	C	26.5	C	24.6	C	26.5	B	17.4	C	26.5	B	17.4
Washington SB right	A	7.8	A	8.4	A	8.4	A	5.7	A	8.4	A	5.7
Washington Street/Tupper Street	B	12.2	B	10.4	B	12.1			B	12.1		
Tupper EB left/thru | thru | thru/right	A	0.5	A	0.5	A	0.5			A	0.5		
Washington NB thru	C	22.7	C	22.8	C	23.4			C	23.4		
Washington NB right	A	8.0	A	9.7	A	9.7			A	9.7		
Washington SB left	D	49.1	D	45.1	D	47.8			D	47.8		
Washington SB thru	D	38.4	D	36.5	D	39.4			D	39.4		
Ellicott Street/Best Street	A	7.7	A	7.7	A	7.7			A	7.7		
Best EB left/thru	A	9.6	A	9.7	A	9.7			A	9.7		
Best WB thru/right	A	6.6	A	6.6	A	6.6			A	6.6		
Ellicott NB left/thru | thru/right	A	5.4	A	5.4	A	5.4			A	5.4		
Ellicott Street/High Street	A	9.8	A	9.6	F	127.6	C	22.5	B	18.7		
High EB left/thru	B	15.2	A	9.2	B	11.8	B	16.5	B	11.2		
High WB thru/right	B	11.8	A	8.9	B	10.0	B	14.0	C	31.3		
Ellicott NB left/thru | thru/right	A	4.3	B	10.5	F	325.9	B	12.0	A	9.9		
Ellicott SB left/thru/right			B	10.5	F	83.7	C	32.3	B	11.6		

BNMC DGEIS TIS **PM Peak Hour Operations Summary - Signalized**

	Existing		No-Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Ellicott Street/Goodell Street	A	5.6	B	11.5	F	198.2	B	16.1	B	14.5		
Goodell WB left/thru I thru I thru I thru/right	A	3.3	A	3.3	A	2.3	A	6.3	A	2.8		
Ellicott NB left/thru	B	15.5	C	25.1	F	1308.2	D	36.5	D	41.8		
Ellicott SB thru/left			C	27.4	F	151.3	C	26.2	C	30.2		
Ellicott Street/Tupper Street	A	9.7	B	17.2	F	145.5	D	38.1	C	28.9	B	16.9
Tupper EB left/thru I thru I thru/right	A	5.7	A	5.2	A	5.3	D	43.4	A	5.1	B	10.9
Ellicott NB thru/right I right	C	22.0	C	22.4	C	23.6	D	39.5	C	23.6	B	15.9
Ellicott NB right	B	19.7	C	20.7	C	21.3	D	40.1	C	21.3	B	15.9
Ellicott SB left/thru I thru	C	20.6	D	48.4	F	395.9	D	35.6	F	92.0	C	32.2
Elm Street/Tupper Street	A	6.6	A	7.0	B	13.8	B	19.2	A	8.3		
Tupper EB thru I thru	A	4.6	A	5.0	B	10.4			A	5.6		
Elm NB thru I thru/right	B	16.9	B	18.6	C	32.9			C	20.9		
Elm Street/Genesee Street	A	8.6	A	8.9	A	5.0			A	9.1		
Genesee EB left/thru I thru	A	8.4	A	8.2	A	7.9			A	7.9		
Genesee WB thru I thru/right	B	19.9	C	20.6	C	21.0			C	21.0		
Elm NB left/thru I thru I thru	A	8.0	A	8.3	A	3.6			A	8.6		
Elm NB right	A	0.2	A	0.1	A	0.1			A	0.1		
Elm Street/Sycamore Street	A	9.5	A	9.8	C	22.7			A	9.7		
Sycamore EB left/thru	D	39.1	D	39.5	D	51.3			D	39.4		
Sycamore WB thru/right	C	21.1	C	20.9	C	20.9			C	20.9		
Elm NB left/thru I thru I thru/right	A	5.6	A	5.9	B	19.7			A	6.0		
Elm Street/Broadway Street	A	5.7	A	5.6	A	5.6			A	5.5		
Broadway EB left/thru I thru	A	8.2	A	8.2	A	8.0			A	8.0		
Broadway WB thru I thru/right	B	15.2	B	14.8	B	14.8			B	14.8		
Elm NB left/thru I thru I thru/right	A	4.4	A	4.3	A	4.3			A	4.3		
Elm Street/William Street	A	8.1	A	8.3	A	8.0			A	8.0		
William EB left/thru I thru	C	28.7	C	28.6	C	28.0			C	28.0		
William WB thru I thru/right	C	22.0	C	22.1	C	22.1			C	22.1		
Elm NB left/thru I thru I thru/right	A	3.7	A	3.9	A	3.9			A	3.9		
Elm Street/Clinton Street	B	13.7	B	14.3	B	13.9			B	13.9		
Clinton EB left/thru	D	43.5	D	45.6	D	45.4			D	45.4		
Clinton WB thru/right	B	12.9	B	13.1	B	13.1			B	13.1		
Elm NB left/thru I thru I thru/right	A	5.2	A	5.4	A	5.5			A	5.5		
Elm Street/North Division Street	B	12.4	B	12.8	B	13.3			B	12.7		
North Division WB thru I thru/right	B	11.5	B	13.1	B	14.6			B	14.6		
Elm NB left/thru I thru I thru	B	12.5	B	12.8	B	13.2			B	12.5		
Elm Street/South Division Street	A	6.3	A	6.5	A	6.5			A	6.4		
South Division EB left	B	10.2	B	10.9	B	10.9			B	11.4		
South Division EB left/thru I thru	A	7.7	A	7.9	A	7.9			A	8.1		
Elm NB thru I thru I thru/right	A	4.1	A	4.1	A	4.1			A	3.9		
Elm Street/Swan Street	B	15.5	B	16.1	B	16.1			B	15.7		
Swan WB thru/right	C	32.8	C	34.6	C	34.6			C	34.6		
Elm NB left	A	1.7	A	1.7	A	1.7			A	1.7		
Elm NB left/thru I thru I thru/right	A	7.6	A	7.7	A	7.7			A	7.9		
Oak Street/Goodell Street	B	12.2	B	12.5	D	46.4	C	20.1	C	24.0	B	16.6
Goodell WB left/thru I thru I thru I thru/right	A	7.2	A	7.2	A	8.2	B	13.8	A	7.9	B	12.9
Oak SB thru/right	C	29.6	C	30.2	F	123.3	C	32.8	E	62.0	C	25.4
Oak Street/Tupper Street	B	10.2	B	13.7	C	28.0			C	22.2		
Tupper EB thru I thru	A	9.4	B	13.9	C	26.5			B	14.2		

BNMC DGEIS TIS **PM Peak Hour Operations Summary - Signalized**

	Existing		No-Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Tupper EB right	A	1.1	A	1.8	A	6.8			A	4.3		
Oak SB left/thru I thru	B	18.0	B	19.8	D	38.7			D	44.6		
Oak Street/Genesee Street	B	15.5	B	16.2	B	18.9			B	18.9		
Genesee EB thru I thru/right	C	24.0	C	24.6	C	24.9			C	24.9		
Genesee WB left/thru I thru	B	16.0	B	15.6	B	13.7			B	15.3		
Oak SB left/thru I thru I thru	B	14.4	B	15.2	B	19.2			B	19.0		
Oak SB right	A	3.1	A	3.3	A	4.4			A	4.3		
Oak Street/Sycamore Street	A	8.0	A	8.2	A	8.3			A	8.1		
Sycamore EB thru/right	C	26.7	C	27.6	C	28.3			C	28.3		
Sycamore WB left/thru	C	22.0	C	23.2	C	26.1			C	23.6		
Oak SB left/thru I thru I thru/right	A	4.1	A	4.2	A	4.4			A	4.4		
Oak Street/Broadway Street	A	8.2	A	8.5	A	8.7			A	8.7		
Broadway EB thru I thru/right	C	22.3	C	22.4	C	22.4			C	22.4		
Broadway WB left/thru I thru	B	19.0	B	19.3	B	19.3			B	19.3		
Oak SB left/thru I thru I thru/right	A	5.3	A	5.6	A	6.1			A	6.1		
Oak Street/William Street	A	4.4	A	4.5	A	4.4			A	4.4		
William EB thru I thru/right	C	20.3	C	21.4	C	22.5			C	22.5		
William WB left/thru I thru	C	21.1	C	21.4	C	21.3			C	21.3		
Oak SB left/thru I thru I thru/right	A	1.8	A	1.9	A	2.0			A	2.0		
Oak Street/Clinton Street	B	10.5	B	11.4	B	11.6			B	11.6		
Clinton EB thru/right	C	32.8	D	35.5	D	35.9			D	35.9		
Clinton WB left/thru	C	21.2	C	22.5	C	22.6			C	22.7		
Oak SB left/thru I thru I thru/right	A	5.7	A	6.1	A	6.8			A	6.8		
Oak Street/North Division Street	A	7.1	A	7.4	A	7.9			A	7.9		
North Division WB left/thru I thru I thru	B	15.5	B	16.1	B	16.7			B	16.6		
Oak SB thru I thru I thru/right	A	6.5	A	6.8	A	7.3			A	7.3		
Oak Street/South Division Street	B	11.1	B	11.7	B	11.7			B	11.2		
South Division EB thru I thru I thru	C	23.5	C	23.7	C	23.7			C	23.7		
South Division EB right	D	41.0	D	45.3	D	45.3			D	45.9		
Oak SB left/thru I thru I thru I thru	A	1.5	A	1.6	A	1.6			A	1.7		
Oak Street/Swan Street	B	10.8	B	11.1	B	11.1			B	10.6		
Swan EB right I right	C	30.8	C	32.0	C	32.0			C	32.3		
Swan WB left	C	34.9	D	35.8	D	35.8			D	36.2		
Swan WB thru I thru	C	32.2	C	32.7	C	32.7			C	32.7		
Oak SB thru I thru I thru I thru/right	A	3.6	A	3.7	A	3.7			A	3.6		
Michigan Avenue/Best Street	B	12.6	B	12.7	B	12.3			B	12.3		
Best EB left/thru/right	B	16.4	B	16.8	B	16.8			B	16.8		
Best WB left/thru/right	B	13.6	B	13.7	B	13.7			B	13.7		
Michigan NB left/thru/right	A	6.5	A	6.5	A	7.4			A	7.4		
Michigan SB left/thru/right	A	7.2	A	7.0	A	7.1			A	7.1		
Michigan Avenue/North Street	B	13.7	B	13.6	B	14.6			B	13.5		
North EB left/thru/right	C	25.6	C	26.7	C	29.7			C	25.4		
North WB left/thru/right	C	28.9	C	29.8	C	30.2			D	36.0		
Michigan NB left/thru	A	3.5	A	3.4	A	4.0			A	3.9		
Michigan NB right	A	1.3	A	1.3	A	1.3			A	1.1		
Michigan SB left/thru/right	A	3.4	A	3.4	A	3.8			A	3.7		
Michigan Avenue/High Street	A	6.1	A	6.3	A	7.5			A	9.4		
High EB left/thru/right	B	10.6	B	12.2	B	15.1			C	23.4		
High WB left/thru/right	B	13.8	B	14.3	B	14.3			B	14.3		

BNMC DGEIS TIS **PM Peak Hour Operations Summary - Signalized**

	Existing		No-Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Michigan NB left/thru/right	A	5.5	A	5.6	A	6.0			A	8.5		
Michigan SB left/thru | thru/right	A	4.7	A	4.3	A	4.3			A	6.9		
Michigan Avenue/Carlton Street	B	13.8	B	11.5	B	12.5			F	86.5	B	19.4
Carlton EB left/thru/right	B	11.6	B	12.8	B	12.8			B	12.8	B	13.9
Carlton WB left/thru/right	B	17.4	B	16.8	B	16.8			B	16.8	B	18.3
Michigan NB left/thru/right	A	3.3	A	3.2	A	3.4			A	4.1	A	4.1
Michigan SB left/thru/right	B	18.9	B	15.1	B	17.4			F	139.2	C	27.5
Michigan Avenue/Virginia Street	A	6.8	A	6.4	A	6.7			B	11.8		
Virginia EB left/thru/right	A	6.2	A	6.9	A	6.9			A	6.9		
Michigan NB left/thru/right	A	6.2	A	6.3	A	6.7			A	8.8		
Michigan SB left/thru/right	A	7.4	A	6.2	A	6.7			B	14.5		
Michigan Avenue/Goodell Street	E	73.0	C	30.4	D	37.5	B	18.7	F	173.5	C	23.4
Goodell WB left/thru | thru | thru | thru/right	A	9.0	A	9.1	A	9.6	B	12.6	A	8.3	B	13.5
Michigan NB left	B	17.9	B	18.0	B	18.0	B	15.6	B	18.0	B	14.6
Michigan NB thru	C	20.4	C	20.6	C	21.0	B	17.0	C	21.1	B	14.3
Michigan SB thru | thru/right	F	145.5	E	59.9	F	81.7	C	27.7	F	347.6	C	33.8
Michigan Avenue/Genesee Street	A	9.5	A	9.1	A	9.3			A	9.3		
Genesee EB left/thru | thru/right	A	9.3	A	9.3	A	9.3			A	9.3		
Genesee WB left/thru/right	A	9.1	A	9.3	A	9.3			A	9.3		
Michigan NB left/thru | thru/right	A	9.2	A	9.3	A	9.5			A	9.5		
Michigan SB left/thru | thru/right	A	9.9	A	8.4	A	9.0			A	9.0		

BNMC DGEIS TIS **PM Peak Hour Operations Summary - Unsignalized**

	Existing		No-Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Main Street/Goodrich Street				8.7								
CMHC Driveway EB left/thru/right					b	14.2			b	14.3		
Goodrich WB left/right	b	11.7	b	18.5	b	13.1			b	13.4		
Main NB thru | thru | thru/right	a	0	c	22.9	a	0.2			a	0.2		
Main SB left/thru | thru | thru	a	1.4	a	4	a	0.4			a	0.4		
Main Street/Carlton Street				4								
Carlton WB left/right	b	12.5	b	12.5	b	12.6			b	12.6		
Main NB thru | thru | thru/right	a	0	a	0	a	0.0			a	0.0		
Main SB left/thru | thru | thru	a	1.4	a	3.3	a	1.4			a	1.4		
Washington Street/High Street												
High EB thru/right	a	0	a	0	a	0.0			a	0.0		
High WB left/thru	a	1.3	a	1.3	a	2.4			a	2.2		
Washington NB left/right	b	10.6	b	10.7	b	12.6			b	12.9		
Washington Street/Allen Street												
Allen EB left/thru/right			a	7.2	a	7.3			a	7.3		
Allen WB left/thru/right			a	7.2	a	7.4			a	7.4		
Washington NB left/thru/right			a	7.5	a	7.8			a	7.8		
Washington SB left/thru | thru/right			a	6.6	a	6.8			a	6.8		
Washington Street/Carlton Street												
Carlton EB left/thru/right	a	8.0	a	8.4	a	8.7			a	8.7		
Carlton WB left/thru/right	a	9.5	a	9.8	b	10.2			b	10.2		
Washington NB left/thru/right	a	8.6	a	8.8	a	9.2			a	9.2		
Washington SB left/thru | thru/right	a	7.7	a	7.8	a	8.2			a	8.2		
Ellicott Street/North Street												
North EB left/thru	a	9.1	a	9.6	b	10.0			a	9.7		
North WB thru/right	a	8.9	b	10.3	b	10.5			a	9.8		
Ellicott NB left/thru | thru/right	a	8.7	b	11.9	b	14.5			b	12.3		
Ellicott Street/Goodrich Street												
Goodrich EB left/thru	a	7.7	a	8.1	a	8.1			a	7.8		
Goodrich WB thru/right	a	7.5	a	8.5								
Ellicott NB left/thru | thru/right	a	7.1	a	8.5	a	8.7			a	8.1		
Ellicott SB left/thru/right			a	8.3	a	8.1			a	7.7		
Ellicott Street/Allen Street												
Allen EB left/thru			b	10.5	e	44.4			b	14.3		
Ellicott NB left/thru			a	0.3	a	0.3			a	0.2		
Ellicott SB thru/right			a	0	a	0.0			a	0.0		
Ellicott Street/Carlton Street							B	16.6				
Carlton EB left/thru	a	8.4	a	9.7	b	14.7	B	14.7	b	12.8		
Carlton WB thru/right	a	8.7	b	10.7	c	17.4	C	20.2	b	14.8		
Ellicott NB left/thru | thru/right	a	8.0	b	10.5	e	44.6	A	8.4	c	17.2		
Ellicott SB left/thru/right			b	10.3	f	385.6	C	20.1	d	32.9		
Ellicott Street/Virginia Street												
Virginia WB right	a	9.4	b	13.3	f	75.1			c	20.5		
Ellicott NB thru | thru/right	a	0	a	0	a	0.0			a	0.0		
Ellicott SB left/thru			a	0.2	a	0.2			a	0.1		
Ellicott Street/Oak Street												
Ellicott NB thru | thru/right	a	0	a	0	a	0.0			a	0.0		
Ellicott SB left/thru			a	1.0	b	12.6			a	6.7		
North Oak WB right	b	10.3	b	11.3	b	14.4			b	12.4		
Michigan Avenue/Goodrich Street												
Goodrich EB left/right	b	13.5	b	13.0	c	20.2			f	Err		
SNF Driveway WB left/thru/right					c	16.0			f	Err		
Michigan NB left/thru	a	1.0	a	0.9	a	1.4			a	7.0		
Michigan SB thru/right	a	0	a	0	a	0.3			a	0.1		

BNMC DGEIS TIS **PM Peak Hour Operations Summary - Unsignalized**

	Existing		No-Build		Scenario #1		Scenario #1 Mitigation		Scenario #2		Scenario #2 Mitigation	
Intersection	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**	**LOS**	**Delay (Seconds)**
Michigan Avenue/Cherry Street												
Michigan NB thru I thru/right	a	0	a	0	a	0			a	0	a	0
Michigan SB left/thru I thru	a	9.1	a	9.9	a	7.1			c	12.8	c	18.2
Elm Street/Virginia Street												
Virginia EB left/thru	a	0.4	a	0.7	a	0.7			a	0.7		
Virginia WB thru/right	a	0	a	0	a	0.0			a	0.0		
Elm SB left/right	b	10.8	b	11.0	b	11.0			b	11.0		
Elm Street/Carlton Street												
Carlton EB thru/right	a	8.0	a	8.0	a	8.0			a	8.0		
Carlton WB left/thru	a	8.1	a	8.2	a	8.2			a	8.2		
Elm NB left/right	a	7.5	a	7.6	a	7.6			a	7.6		
Elm Street/Goodell Street												
Goodell WB thru I thru I thru I thru	a	0	a	0	a	0.0			a	0.0		
Elm NB left I left	b	10.9	b	11.0	b	11.1			b	11.9		
High Street/Structure Driveway												
High EB shared left/thru					a	2.6			a	0.9		
High WB shared thru/right					a	0.0			a	0.0		
Driveway SB shared left/right					b	13.0			b	10.3		
Ellicott Street/Structure Driveway												
Driveway EB shared left/right					f	126			a	9.6		
Ellicott NB shared left/thru					a	5.7			a	1.3		
Ellicott SB shared thru/right					a	0.0			a	0.0		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	29	31	7	36	4	179	286	17	10	337	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.938			0.990			0.995			0.991	
Flt Protected		0.995			0.992			0.982			0.999	
Satd. Flow (prot)	0	1739	0	0	1829	0	0	1820	0	0	1844	0
Flt Permitted		0.957			0.960			0.746			0.986	
Satd. Flow (perm)	0	1672	0	0	1770	0	0	1383	0	0	1820	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			4			5			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			388			675			662	
Travel Time (s)		8.6			8.8			15.3			15.0	
Peak Hour Factor	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)	8	32	34	8	40	4	199	318	19	11	374	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	74	0	0	52	0	0	536	0	0	411	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	14.0	51.0	0.0	23.0	23.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%	23.3%	85.0%	0.0%	38.3%	38.3%	0.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		10.0			19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	37.0
Total Split (%)	62%
Maximum Green (s)	33.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		Max			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		7.8			7.9			34.6			20.4	
Actuated g/C Ratio		0.18			0.18			0.79			0.46	
v/c Ratio		0.23			0.16			0.45			0.49	
Control Delay		13.0			17.2			3.9			12.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.0			17.2			3.9			12.2	
LOS		B			B			A			B	
Approach Delay		13.0			17.2			3.9			12.2	
Approach LOS		B			B			A			B	
90th %ile Green (s)	8.9	8.9		8.9	8.9		10.0			19.0	19.0	
90th %ile Term Code	Gap	Gap		Hold	Hold		MaxR			MaxR	MaxR	
70th %ile Green (s)	7.5	7.5		7.5	7.5		10.0			19.0	19.0	
70th %ile Term Code	Gap	Gap		Hold	Hold		MaxR			MaxR	MaxR	
50th %ile Green (s)	6.7	6.7		6.7	6.7		10.0			19.0	19.0	
50th %ile Term Code	Hold	Hold		Hold	Hold		MaxR			MaxR	MaxR	
30th %ile Green (s)	0.0	0.0		0.0	0.0		10.0			19.0	19.0	
30th %ile Term Code	Skip	Skip		Skip	Skip		MaxR			MaxR	MaxR	
10th %ile Green (s)	0.0	0.0		0.0	0.0		10.0			19.0	19.0	
10th %ile Term Code	Skip	Skip		Skip	Skip		MaxR			MaxR	MaxR	
Stops (vph)		37			39			142			245	
Fuel Used(gal)		1			1			4			4	
CO Emissions (g/hr)		40			36			259			292	
NOx Emissions (g/hr)		8			7			50			57	
VOC Emissions (g/hr)		9			8			60			68	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		10			12			40			79	
Queue Length 95th (ft)		36			34			92			156	
Internal Link Dist (ft)		297			308			595			582	
Turn Bay Length (ft)												
Base Capacity (vph)		792			821			1200			846	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.09			0.06			0.45			0.49	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 44	
Natural Cycle: 60	

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	33.0
90th %ile Term Code	MaxR
70th %ile Green (s)	33.0
70th %ile Term Code	MaxR
50th %ile Green (s)	33.0
50th %ile Term Code	MaxR
30th %ile Green (s)	33.0
30th %ile Term Code	MaxR
10th %ile Green (s)	33.0
10th %ile Term Code	MaxR
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	
90th %ile Actuated Cycle: 49.9	
70th %ile Actuated Cycle: 48.5	
50th %ile Actuated Cycle: 47.7	
30th %ile Actuated Cycle: 37	
10th %ile Actuated Cycle: 37	

Splits and Phases: 1: Carlton & Michigan

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	74	52	536	411
v/c Ratio	0.23	0.16	0.45	0.49
Control Delay	13.0	17.2	3.9	12.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.0	17.2	3.9	12.2
Queue Length 50th (ft)	10	12	40	79
Queue Length 95th (ft)	36	34	92	156
Internal Link Dist (ft)	297	308	595	582
Turn Bay Length (ft)				
Base Capacity (vph)	792	821	1200	846
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.09	0.06	0.45	0.49

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	107	0	0	63	17	54	217	39	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.971			0.981				
Flt Protected		0.997						0.991				
Satd. Flow (prot)	0	1857	0	0	1809	0	0	3441	0	0	0	0
Flt Permitted		0.997						0.991				
Satd. Flow (perm)	0	1857	0	0	1809	0	0	3441	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			658	
Travel Time (s)		7.4			17.0			9.7			15.0	
Peak Hour Factor	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)	8	119	0	0	70	19	60	241	43	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	127	0	0	89	0	0	344	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	107	0	0	63	17	54	217	39	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	8	119	0	0	70	19	60	241	43	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total (vph)	127	89	181	164
Volume Left (vph)	8	0	60	0
Volume Right (vph)	0	19	0	43
Hadj (s)	0.05	-0.09	0.20	-0.15
Departure Headway (s)	4.9	4.8	5.2	4.9
Degree Utilization, x	0.17	0.12	0.26	0.22
Capacity (veh/h)	694	702	665	711
Control Delay (s)	8.9	8.4	8.9	8.1
Approach Delay (s)	8.9	8.4	8.5	
Approach LOS	A	A	A	

Intersection Summary			
Delay	8.6		
HCM Level of Service	A		
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	96	62	40	77	15	9	37	22	8	44	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.948			0.984			0.957			0.995	
Flt Protected		0.999			0.985			0.993			0.993	
Satd. Flow (prot)	0	1764	0	0	1805	0	0	1770	0	0	3497	0
Flt Permitted		0.999			0.985			0.993			0.993	
Satd. Flow (perm)	0	1764	0	0	1805	0	0	1770	0	0	3497	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		287			325			1308			645	
Travel Time (s)		6.5			7.4			29.7			14.7	
Peak Hour Factor	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)	2	107	69	44	86	17	10	41	24	9	49	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	147	0	0	75	0	0	60	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 36.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	2	96	62	40	77	15	9	37	22	8	44	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	2	107	69	44	86	17	10	41	24	9	49	2

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	178	147	76	33	27
Volume Left (vph)	2	44	10	9	0
Volume Right (vph)	69	17	24	0	2
Hadj (s)	-0.20	0.03	-0.13	0.17	-0.02
Departure Headway (s)	4.2	4.5	4.7	5.5	5.3
Degree Utilization, x	0.21	0.18	0.10	0.05	0.04
Capacity (veh/h)	823	769	713	610	634
Control Delay (s)	8.3	8.4	8.2	7.6	7.3
Approach Delay (s)	8.3	8.4	8.2	7.5	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	8.2		
HCM Level of Service	A		
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	46	235	19	120	392
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.889		0.989			
Flt Protected	0.991					0.988
Satd. Flow (prot)	1641	0	3500	0	0	5024
Flt Permitted	0.991					0.988
Satd. Flow (perm)	1641	0	3500	0	0	5024
Link Speed (mph)	30		30			30
Link Distance (ft)	287		532			287
Travel Time (s)	6.5		12.1			6.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	51	261	21	133	436
Shared Lane Traffic (%)						
Lane Group Flow (vph)	62	0	282	0	0	569
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 30.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	46	235	19	120	392
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	51	261	21	133	436
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			532			287
pX, platoon unblocked	0.99					
vC, conflicting volume	684	141			282	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	656	141			282	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	94			90	
cM capacity (veh/h)	354	881			1277	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	62	174	108	220	174	174
Volume Left	11	0	0	133	0	0
Volume Right	51	0	21	0	0	0
cSH	696	1700	1700	1277	1700	1700
Volume to Capacity	0.09	0.10	0.06	0.10	0.10	0.10
Queue Length 95th (ft)	7	0	0	9	0	0
Control Delay (s)	10.7	0.0	0.0	5.3	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	10.7	0.0		2.0		
Approach LOS	B					

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	32	46	3	29	15	116	208	12	10	271	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.930			0.956			0.995			0.974	
Flt Protected		0.994			0.997			0.983			0.999	
Satd. Flow (prot)	0	1722	0	0	1775	0	0	1822	0	0	3444	0
Flt Permitted		0.977			0.990			0.773			0.945	
Satd. Flow (perm)	0	1693	0	0	1763	0	0	1433	0	0	3258	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51			17			6			64	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1103			233			662			363	
Travel Time (s)		25.1			5.3			15.0			8.3	
Peak Hour Factor	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)	11	36	51	3	32	17	129	231	13	11	301	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	98	0	0	52	0	0	373	0	0	376	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.19			0.10			0.42			0.18	
Control Delay		10.4			12.6			7.7			4.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.4			12.6			7.7			4.3	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.4			12.6			7.7			4.3	
Approach LOS		B			B			A			A	
Stops (vph)		36			27			158			106	
Fuel Used(gal)		1			0			3			2	
CO Emissions (g/hr)		80			25			219			129	
NOx Emissions (g/hr)		16			5			43			25	
VOC Emissions (g/hr)		19			6			51			30	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		12			9			58			21	
Queue Length 95th (ft)		43			31			106			36	
Internal Link Dist (ft)		1023			153			582			283	
Turn Bay Length (ft)												
Base Capacity (vph)		516			512			886			2034	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.19			0.10			0.42			0.18	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 6.9 Intersection LOS: A
Intersection Capacity Utilization 45.5% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 6: High & Michigan

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	98	52	373	376
v/c Ratio	0.19	0.10	0.42	0.18
Control Delay	10.4	12.6	7.7	4.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.4	12.6	7.7	4.3
Queue Length 50th (ft)	12	9	58	21
Queue Length 95th (ft)	43	31	106	36
Internal Link Dist (ft)	1023	153	582	283
Turn Bay Length (ft)				
Base Capacity (vph)	516	512	886	2034
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.19	0.10	0.42	0.18

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	105	0	0	119	23	55	142	111	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.978			0.946				
Flt Protected		0.993						0.991				
Satd. Flow (prot)	0	1850	0	0	1822	0	0	3318	0	0	0	0
Flt Permitted		0.961						0.991				
Satd. Flow (perm)	0	1790	0	0	1822	0	0	3318	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					19			123				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			1103			658			365	
Travel Time (s)		7.8			25.1			15.0			8.3	
Peak Hour Factor	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)	18	117	0	0	132	26	61	158	123	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	135	0	0	158	0	0	342	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	23.0	23.0	0.0	0.0	23.0	0.0	35.0	35.0	0.0	0.0	0.0	0.0
Total Split (%)	39.7%	39.7%	0.0%	0.0%	39.7%	0.0%	60.3%	60.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	19.0	19.0			19.0		31.0	31.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		20.0			20.0			32.0				
Actuated g/C Ratio		0.34			0.34			0.55				
v/c Ratio		0.22			0.25			0.18				
Control Delay		14.7			13.2			4.3				
Queue Delay		0.0			0.0			0.0				
Total Delay		14.7			13.2			4.3				
LOS		B			B			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		14.7			13.2			4.3				
Approach LOS		B			B			A				
Stops (vph)		82			84			87				
Fuel Used(gal)		1			2			2				
CO Emissions (g/hr)		80			144			163				
NOx Emissions (g/hr)		16			28			32				
VOC Emissions (g/hr)		19			33			38				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		32			33			17				
Queue Length 95th (ft)		67			70			33				
Internal Link Dist (ft)		262			1023			578			285	
Turn Bay Length (ft)												
Base Capacity (vph)		617			641			1886				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.22			0.25			0.18				

Intersection Summary

Area Type: Other
Cycle Length: 58
Actuated Cycle Length: 58
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBT, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.25
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 33.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 7: High & Ellicott

Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	135	158	342
v/c Ratio	0.22	0.25	0.18
Control Delay	14.7	13.2	4.3
Queue Delay	0.0	0.0	0.0
Total Delay	14.7	13.2	4.3
Queue Length 50th (ft)	32	33	17
Queue Length 95th (ft)	67	70	33
Internal Link Dist (ft)	262	1023	578
Turn Bay Length (ft)			
Base Capacity (vph)	617	641	1886
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.22	0.25	0.18

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lane Configurations							
Volume (vph)	34	58	297	36	93	336	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91	
Frt	0.915		0.984				
Flt Protected	0.982					0.989	
Satd. Flow (prot)	1674	0	3483	0	0	5029	
Flt Permitted	0.982					0.822	
Satd. Flow (perm)	1674	0	3483	0	0	4180	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	64		21				
Link Speed (mph)	30		30			30	
Link Distance (ft)	293		353			353	
Travel Time (s)	6.7		8.0			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	38	64	330	40	103	373	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	102	0	370	0	0	476	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		1		1	1	
Detector Template							
Leading Detector (ft)	50		50		50	50	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	50		50		50	50	
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Turn Type					custom		
Protected Phases	8		2		1	1 6	6
Permitted Phases					6		
Detector Phase	8		2		1	1 6	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0		4.0
Minimum Split (s)	20.0		20.0		8.0		20.0
Total Split (s)	27.0	0.0	36.0	0.0	14.0	64.0	50.0
Total Split (%)	35.1%	0.0%	46.8%	0.0%	18.2%	83.1%	65%
Maximum Green (s)	23.0		32.0		10.0		46.0
Yellow Time (s)	3.5		3.5		3.5		3.5
All-Red Time (s)	0.5		0.5		0.5		0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lead/Lag			Lag		Lead		
Lead-Lag Optimize?			Yes		Yes		
Vehicle Extension (s)	3.0		3.0		3.0		3.0
Recall Mode	Min		Max		None		Max
Walk Time (s)	5.0		5.0				5.0
Flash Dont Walk (s)	11.0		11.0				11.0
Pedestrian Calls (#/hr)	0		0				0
Act Effct Green (s)	8.2		35.9			47.1	
Actuated g/C Ratio	0.13		0.59			0.77	
v/c Ratio	0.36		0.18			0.14	
Control Delay	15.4		6.3			2.1	
Queue Delay	0.0		0.0			0.0	
Total Delay	15.4		6.3			2.1	
LOS	B		A			A	
Approach Delay	15.4		6.3			2.1	
Approach LOS	B		A			A	
90th %ile Green (s)	10.3		32.9		9.1		46.0
90th %ile Term Code	Gap		Hold		Gap		MaxR
70th %ile Green (s)	8.2		34.7		7.3		46.0
70th %ile Term Code	Gap		Hold		Gap		MaxR
50th %ile Green (s)	6.8		35.1		6.9		46.0
50th %ile Term Code	Gap		Hold		Gap		MaxR
30th %ile Green (s)	5.5		35.5		6.5		46.0
30th %ile Term Code	Gap		Hold		Gap		MaxR
10th %ile Green (s)	5.5		35.8		6.2		46.0
10th %ile Term Code	Gap		Hold		Gap		MaxR
Stops (vph)	38		135			91	
Fuel Used(gal)	1		2			2	
CO Emissions (g/hr)	50		146			130	
NOx Emissions (g/hr)	10		28			25	
VOC Emissions (g/hr)	11		34			30	
Dilemma Vehicles (#)	0		0			0	
Queue Length 50th (ft)	13		26			10	
Queue Length 95th (ft)	50		55			22	
Internal Link Dist (ft)	213		273			273	
Turn Bay Length (ft)							
Base Capacity (vph)	695		2048			3363	
Starvation Cap Reductn	0		0			0	
Spillback Cap Reductn	0		0			0	
Storage Cap Reductn	0		0			0	
Reduced v/c Ratio	0.15		0.18			0.14	

Intersection Summary	
Area Type:	Other
Cycle Length: 77	
Actuated Cycle Length: 61.3	
Natural Cycle: 50	

Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.36	
Intersection Signal Delay: 5.2	Intersection LOS: A
Intersection Capacity Utilization 33.2%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 64.3	
70th %ile Actuated Cycle: 62.2	
50th %ile Actuated Cycle: 60.8	
30th %ile Actuated Cycle: 59.5	
10th %ile Actuated Cycle: 59.5	

Splits and Phases: 8: High & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	102	370	476
v/c Ratio	0.36	0.18	0.14
Control Delay	15.4	6.3	2.1
Queue Delay	0.0	0.0	0.0
Total Delay	15.4	6.3	2.1
Queue Length 50th (ft)	13	26	10
Queue Length 95th (ft)	50	55	22
Internal Link Dist (ft)	213	273	273
Turn Bay Length (ft)			
Base Capacity (vph)	695	2048	3363
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.15	0.18	0.14

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	12	42	0	0	0	199	523	11	6	302	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.904						0.998			0.994	
Flt Protected		0.995						0.987			0.999	
Satd. Flow (prot)	0	1676	0	0	0	0	0	1835	0	0	1850	0
Flt Permitted		0.995						0.810			0.988	
Satd. Flow (perm)	0	1676	0	0	0	0	0	1506	0	0	1829	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47						2			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			376			922			675	
Travel Time (s)		8.3			8.5			21.0			15.3	
Peak Hour Factor	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)	6	13	47	0	0	0	221	581	12	7	336	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	66	0	0	0	0	0	814	0	0	360	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm			Perm		
Protected Phases		4						2			6	
Permitted Phases	4						2			6		
Minimum Split (s)	20.0	20.0					20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0					36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5					3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5					0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0					5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.0						37.0			37.0	
Actuated g/C Ratio		0.28						0.62			0.62	
v/c Ratio		0.13						0.88			0.32	
Control Delay		8.5						23.3			6.3	
Queue Delay		0.0						0.0			0.0	
Total Delay		8.5						23.3			6.3	
LOS		A						C			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.5						23.3			6.3	
Approach LOS		A						C			A	
Stops (vph)		21						532			137	
Fuel Used(gal)		0						12			3	
CO Emissions (g/hr)		27						817			201	
NOx Emissions (g/hr)		5						159			39	
VOC Emissions (g/hr)		6						189			47	
Dilemma Vehicles (#)		0						0			0	
Queue Length 50th (ft)		5						209			52	
Queue Length 95th (ft)		29						#467			89	
Internal Link Dist (ft)		283			296			842			595	
Turn Bay Length (ft)												
Base Capacity (vph)		509						929			1131	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.13						0.88			0.32	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Pretimed
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 17.6 Intersection LOS: B
Intersection Capacity Utilization 69.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Virginia & Michigan

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	66	814	360
v/c Ratio	0.13	0.88	0.32
Control Delay	8.5	23.3	6.3
Queue Delay	0.0	0.0	0.0
Total Delay	8.5	23.3	6.3
Queue Length 50th (ft)	5	209	52
Queue Length 95th (ft)	29	#467	89
Internal Link Dist (ft)	283	842	595
Turn Bay Length (ft)			
Base Capacity (vph)	509	929	1131
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.13	0.88	0.32

Intersection Summary

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	38	300	59	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.865	0.975			
Flt Protected						
Satd. Flow (prot)	0	1611	3451	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3451	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	735		148			425
Travel Time (s)	16.7		3.4			9.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	42	333	66	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	42	399	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 20.2%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	38	300	59	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	42	333	66	0	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)			939			
pX, platoon unblocked						
vC, conflicting volume	366	199			399	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	366	199			399	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	95			100	
cM capacity (veh/h)	607	808			1156	

Direction, Lane #	WB 1	NB 1	NB 2
Volume Total	42	222	177
Volume Left	0	0	0
Volume Right	42	0	66
cSH	808	1700	1700
Volume to Capacity	0.05	0.13	0.10
Queue Length 95th (ft)	4	0	0
Control Delay (s)	9.7	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.7	0.0	
Approach LOS	A		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		

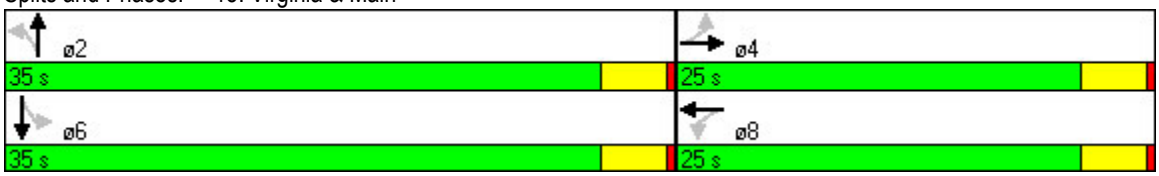
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	35	16	2	9	1	9	200	2	9	234	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.972			0.990			0.999			0.977	
Flt Protected		0.983			0.992			0.998			0.998	
Satd. Flow (prot)	0	1780	0	0	1829	0	0	3529	0	0	4958	0
Flt Permitted		0.883			0.962			0.943			0.933	
Satd. Flow (perm)	0	1599	0	0	1774	0	0	3334	0	0	4635	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			1			2			50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		513			160			728			532	
Travel Time (s)		11.7			3.6			16.5			12.1	
Peak Hour Factor	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)	29	39	18	2	10	1	10	222	2	10	260	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	13	0	0	234	0	0	320	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.7			7.5			43.2			43.2	
Actuated g/C Ratio		0.15			0.14			0.81			0.81	
v/c Ratio		0.35			0.05			0.09			0.08	
Control Delay		20.5			18.0			2.5			2.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.5			18.0			2.5			2.1	
LOS		C			B			A			A	
Approach Delay		20.5			18.0			2.5			2.1	
Approach LOS		C			B			A			A	
90th %ile Green (s)	10.0	10.0		10.0	10.0		31.8	31.8		31.8	31.8	
90th %ile Term Code	Gap	Gap		Hold	Hold		Dwell	Dwell		Dwell	Dwell	
70th %ile Green (s)	8.7	8.7		8.7	8.7		37.2	37.2		37.2	37.2	
70th %ile Term Code	Gap	Gap		Hold	Hold		Dwell	Dwell		Dwell	Dwell	
50th %ile Green (s)	7.9	7.9		7.9	7.9		45.9	45.9		45.9	45.9	
50th %ile Term Code	Gap	Gap		Hold	Hold		Dwell	Dwell		Dwell	Dwell	
30th %ile Green (s)	0.0	0.0		0.0	0.0		46.0	46.0		46.0	46.0	
30th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		46.0	46.0		46.0	46.0	
10th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	
Stops (vph)		56			13			49			56	
Fuel Used(gal)		1			0			2			2	
CO Emissions (g/hr)		66			9			110			114	
NOx Emissions (g/hr)		13			2			21			22	
VOC Emissions (g/hr)		15			2			26			26	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		24			4			8			7	
Queue Length 95th (ft)		46			14			20			15	
Internal Link Dist (ft)		433			80			648			452	
Turn Bay Length (ft)												
Base Capacity (vph)		648			707			2715			3783	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.13			0.02			0.09			0.08	

Intersection Summary

Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 53.1	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 26.7%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 49.8	
70th %ile Actuated Cycle: 53.9	
50th %ile Actuated Cycle: 61.8	
30th %ile Actuated Cycle: 50	
10th %ile Actuated Cycle: 50	

Splits and Phases: 15: Virginia & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	86	13	234	320
v/c Ratio	0.35	0.05	0.09	0.08
Control Delay	20.5	18.0	2.5	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.5	18.0	2.5	2.1
Queue Length 50th (ft)	24	4	8	7
Queue Length 95th (ft)	46	14	20	15
Internal Link Dist (ft)	433	80	648	452
Turn Bay Length (ft)				
Base Capacity (vph)	648	707	2715	3783
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.13	0.02	0.09	0.08

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	117	27	13	59	7	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975				0.895	
Flt Protected				0.991	0.989	
Satd. Flow (prot)	1816	0	0	1846	1649	0
Flt Permitted				0.991	0.989	
Satd. Flow (perm)	1816	0	0	1846	1649	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	747			377	583	
Travel Time (s)	17.0			8.6	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	130	30	14	66	8	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	160	0	0	80	36	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	117	27	13	59	7	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	130	30	14	66	8	28

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	160	80	36
Volume Left (vph)	0	14	8
Volume Right (vph)	30	0	28
Hadj (s)	-0.08	0.07	-0.39
Departure Headway (s)	4.0	4.2	4.0
Degree Utilization, x	0.18	0.09	0.04
Capacity (veh/h)	890	842	839
Control Delay (s)	7.8	7.6	7.2
Approach Delay (s)	7.8	7.6	7.2
Approach LOS	A	A	A

Intersection Summary			
Delay	7.7		
HCM Level of Service	A		
Intersection Capacity Utilization	24.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	26	37	31	222	28	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.881		0.970	
Flt Protected		0.980			0.963	
Satd. Flow (prot)	0	1825	1641	0	1740	0
Flt Permitted		0.980			0.963	
Satd. Flow (perm)	0	1825	1641	0	1740	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		735	363		583	
Travel Time (s)		16.7	8.3		13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	29	41	34	247	31	9
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	70	281	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 32.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	26	37	31	222	28	8
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)	29	41	34	247	31	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			363			
pX, platoon unblocked						
vC, conflicting volume	281				257	158
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	281				257	158
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				96	99
cM capacity (veh/h)	1281				716	888

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	70	281	40
Volume Left	29	0	31
Volume Right	0	247	9
cSH	1281	1700	748
Volume to Capacity	0.02	0.17	0.05
Queue Length 95th (ft)	2	0	4
Control Delay (s)	3.4	0.0	10.1
Lane LOS	A		B
Approach Delay (s)	3.4	0.0	10.1
Approach LOS			B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	246	54	0	0	0	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.973					0.865
Flt Protected						
Satd. Flow (prot)	3444	0	0	0	0	1611
Flt Permitted						
Satd. Flow (perm)	3444	0	0	0	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	791			148	443	
Travel Time (s)	18.0			3.4	10.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	273	60	0	0	0	164
Shared Lane Traffic (%)						
Lane Group Flow (vph)	333	0	0	0	0	164
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 24.4%	ICU Level of Service A
Analysis Period (min) 15	

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	246	54	0	0	0	148
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)	273	60	0	0	0	164
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	791					
pX, platoon unblocked						
vC, conflicting volume			333		303	167
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			333		303	167
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		100	81
cM capacity (veh/h)			1223		664	848

Direction, Lane #	NB 1	NB 2	NW 1
Volume Total	182	151	164
Volume Left	0	0	0
Volume Right	0	60	164
cSH	1700	1700	848
Volume to Capacity	0.11	0.09	0.19
Queue Length 95th (ft)	0	0	18
Control Delay (s)	0.0	0.0	10.3
Lane LOS			B
Approach Delay (s)	0.0		10.3
Approach LOS			B

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	24.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	95	0	0	176	14	33	59	19	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.990			0.975				
Flt Protected		0.993						0.985				
Satd. Flow (prot)	0	1850	0	0	1844	0	0	3399	0	0	0	0
Flt Permitted		0.993						0.985				
Satd. Flow (perm)	0	1850	0	0	1844	0	0	3399	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			1080			316			653	
Travel Time (s)		6.8			24.5			7.2			14.8	
Peak Hour Factor	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)	16	106	0	0	196	16	37	66	21	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	212	0	0	124	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 26.8%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	95	0	0	176	14	33	59	19	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	16	106	0	0	196	16	37	66	21	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total (vph)	121	211	69	54
Volume Left (vph)	16	0	37	0
Volume Right (vph)	0	16	0	21
Hadj (s)	0.06	-0.01	0.30	-0.24
Departure Headway (s)	4.5	4.4	5.6	5.0
Degree Utilization, x	0.15	0.26	0.11	0.08
Capacity (veh/h)	768	794	611	673
Control Delay (s)	8.3	8.8	8.0	7.2
Approach Delay (s)	8.3	8.8	7.7	
Approach LOS	A	A	A	

Intersection Summary			
Delay	8.4		
HCM Level of Service	A		
Intersection Capacity Utilization	26.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	55	44	72	143	31	42	78	25	29	181	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.944			0.983				0.850		0.980	
Flt Protected		0.997			0.986			0.983			0.994	
Satd. Flow (prot)	0	1753	0	0	1805	0	0	1831	1583	0	1815	0
Flt Permitted		0.981			0.884			0.858			0.965	
Satd. Flow (perm)	0	1725	0	0	1619	0	0	1598	1583	0	1762	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47			9				28		28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			414			330			643	
Travel Time (s)		24.5			9.4			7.5			14.6	
Peak Hour Factor	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)	8	61	49	80	159	34	47	87	28	32	201	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	118	0	0	273	0	0	134	28	0	274	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	51.0	51.0	51.0	51.0	51.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	28.2%	28.2%	0.0%	71.8%	71.8%	71.8%	71.8%	71.8%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		15.5			15.5			49.5	49.5		49.5	
Actuated g/C Ratio		0.22			0.22			0.70	0.70		0.70	
v/c Ratio		0.29			0.76			0.12	0.03		0.22	
Control Delay		16.1			39.5			4.2	1.7		4.2	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		16.1			39.5			4.2	1.7		4.2	
LOS		B			D			A	A		A	
Approach Delay		16.1			39.5			3.8			4.2	
Approach LOS		B			D			A			A	
90th %ile Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
90th %ile Term Code	Hold	Hold		Max	Max		MaxR	MaxR	MaxR	MaxR	MaxR	
70th %ile Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
70th %ile Term Code	Hold	Hold		Max	Max		MaxR	MaxR	MaxR	MaxR	MaxR	
50th %ile Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
50th %ile Term Code	Hold	Hold		Max	Max		MaxR	MaxR	MaxR	MaxR	MaxR	
30th %ile Green (s)	13.9	13.9		13.9	13.9		47.0	47.0	47.0	47.0	47.0	
30th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR	MaxR	MaxR	MaxR	
10th %ile Green (s)	10.6	10.6		10.6	10.6		54.5	54.5	54.5	54.5	54.5	
10th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell	Dwell	Dwell	Dwell	
Stops (vph)		55			211			37	4		73	
Fuel Used(gal)		2			4			1	0		2	
CO Emissions (g/hr)		108			275			43	7		130	
NOx Emissions (g/hr)		21			54			8	1		25	
VOC Emissions (g/hr)		25			64			10	2		30	
Dilemma Vehicles (#)		0			0			0	0		0	
Queue Length 50th (ft)		25			105			17	0		34	
Queue Length 95th (ft)		65			#205			34	7		60	
Internal Link Dist (ft)		1000			334			250			563	
Turn Bay Length (ft)												
Base Capacity (vph)		449			394			1113	1111		1236	
Starvation Cap Reductn		0			0			0	0		0	
Spillback Cap Reductn		0			0			0	0		0	
Storage Cap Reductn		0			0			0	0		0	
Reduced v/c Ratio		0.26			0.69			0.12	0.03		0.22	

Intersection Summary	
Area Type:	Other
Cycle Length: 71	
Actuated Cycle Length: 71	
Natural Cycle: 40	

Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 46.8%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 71	
70th %ile Actuated Cycle: 71	
50th %ile Actuated Cycle: 71	
30th %ile Actuated Cycle: 68.9	
10th %ile Actuated Cycle: 73.1	

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

Splits and Phases: 21: North & Michigan

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	118	273	134	28	274
v/c Ratio	0.29	0.76	0.12	0.03	0.22
Control Delay	16.1	39.5	4.2	1.7	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.1	39.5	4.2	1.7	4.2
Queue Length 50th (ft)	25	105	17	0	34
Queue Length 95th (ft)	65	#205	34	7	60
Internal Link Dist (ft)	1000	334	250		563
Turn Bay Length (ft)					
Base Capacity (vph)	449	394	1113	1111	1236
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.69	0.12	0.03	0.22

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	32	29	0	0	50	47	33	148	32	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.935			0.977				
Flt Protected		0.974						0.992				
Satd. Flow (prot)	0	1814	0	0	1742	0	0	3430	0	0	0	0
Flt Permitted		0.974						0.992				
Satd. Flow (perm)	0	1814	0	0	1742	0	0	3430	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		655			1107			365			316	
Travel Time (s)		14.9			25.2			8.3			7.2	
Peak Hour Factor	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)	36	32	0	0	56	52	37	164	36	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	0	108	0	0	237	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 22.7%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	32	29	0	0	50	47	33	148	32	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	36	32	0	0	56	52	37	164	36	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total (vph)	68	108	119	118
Volume Left (vph)	36	0	37	0
Volume Right (vph)	0	52	0	36
Hadj (s)	0.14	-0.26	0.19	-0.18
Departure Headway (s)	4.7	4.3	5.1	4.7
Degree Utilization, x	0.09	0.13	0.17	0.15
Capacity (veh/h)	716	791	683	734
Control Delay (s)	8.2	7.9	7.9	7.4
Approach Delay (s)	8.2	7.9	7.7	
Approach LOS	A	A	A	

Intersection Summary			
Delay	7.8		
HCM Level of Service	A		
Intersection Capacity Utilization	22.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	14	294	13	27	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.920		0.994			
Flt Protected	0.980					0.994
Satd. Flow (prot)	1679	0	3518	0	0	5055
Flt Permitted	0.980					0.994
Satd. Flow (perm)	1679	0	3518	0	0	5055
Link Speed (mph)	30		30			30
Link Distance (ft)	655		353			338
Travel Time (s)	14.9		8.0			7.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	16	327	14	30	230
Shared Lane Traffic (%)						
Lane Group Flow (vph)	27	0	341	0	0	260
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 26.4%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	14	294	13	27	207
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	16	327	14	30	230
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			353			338
pX, platoon unblocked						
vC, conflicting volume	471	171			341	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	471	171			341	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	98			98	
cM capacity (veh/h)	509	843			1215	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	27	218	123	76	92	92
Volume Left	11	0	0	30	0	0
Volume Right	16	0	14	0	0	0
cSH	662	1700	1700	1215	1700	1700
Volume to Capacity	0.04	0.13	0.07	0.02	0.05	0.05
Queue Length 95th (ft)	3	0	0	2	0	0
Control Delay (s)	10.7	0.0	0.0	3.3	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	10.7	0.0		1.0		
Approach LOS	B					

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

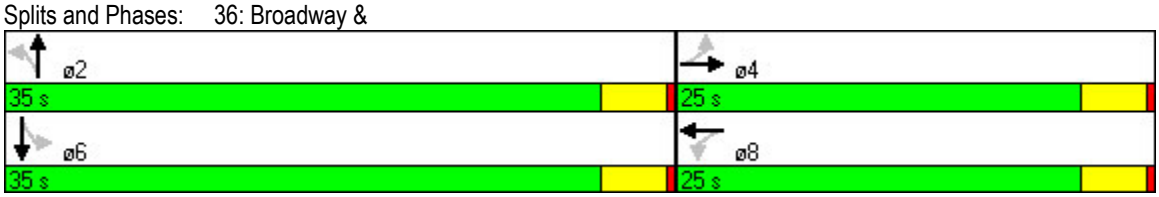
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	126	8	27	240	49	32	489	30	20	280	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.992			0.977			0.992			0.987	
Flt Protected		0.992			0.996			0.997			0.997	
Satd. Flow (prot)	0	3289	0	0	3346	0	0	3433	0	0	3416	0
Flt Permitted		0.883			0.923			0.920			0.912	
Satd. Flow (perm)	0	2928	0	0	3100	0	0	3168	0	0	3125	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			38			14			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		282			892			685			803	
Travel Time (s)		6.4			20.3			15.6			18.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	8%	5%	5%	5%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	27	140	9	30	267	54	36	543	33	22	311	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	176	0	0	351	0	0	612	0	0	364	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.17			0.32			0.37			0.22	
Control Delay		13.3			13.6			9.3			6.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.3			13.6			9.3			6.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		13.3			13.6			9.3			6.2	
Approach LOS		B			B			A			A	
Stops (vph)		97			194			294			169	
Fuel Used(gal)		2			4			6			3	
CO Emissions (g/hr)		111			290			392			238	
NOx Emissions (g/hr)		22			56			76			46	
VOC Emissions (g/hr)		26			67			91			55	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		21			42			62			25	
Queue Length 95th (ft)		40			70			93			25	
Internal Link Dist (ft)		202			812			605			723	
Turn Bay Length (ft)												
Base Capacity (vph)		1031			1110			1644			1626	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.17			0.32			0.37			0.22	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.37
Intersection Signal Delay: 10.0 Intersection LOS: B
Intersection Capacity Utilization 51.4% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 36: Broadway &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	176	351	612	364
v/c Ratio	0.17	0.32	0.37	0.22
Control Delay	13.3	13.6	9.3	6.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.3	13.6	9.3	6.2
Queue Length 50th (ft)	21	42	62	25
Queue Length 95th (ft)	40	70	93	25
Internal Link Dist (ft)	202	812	605	723
Turn Bay Length (ft)				
Base Capacity (vph)	1031	1110	1644	1626
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.32	0.37	0.22

Intersection Summary

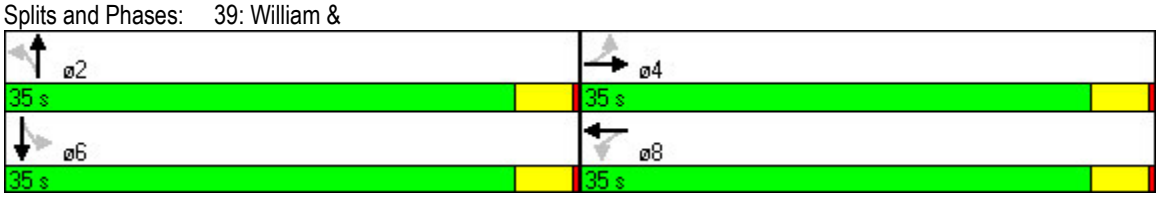
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	80	10	61	212	68	45	497	0	35	252	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.986			0.970						0.991	
Flt Protected		0.994			0.991			0.996			0.994	
Satd. Flow (prot)	0	3104	0	0	3402	0	0	3491	0	0	3387	0
Flt Permitted		0.909			0.884			0.899			0.857	
Satd. Flow (perm)	0	2838	0	0	3035	0	0	3151	0	0	2920	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			57						12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			690			273			685	
Travel Time (s)		6.7			15.7			6.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	14%	14%	2%	2%	2%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	14	89	11	68	236	76	50	552	0	39	280	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	114	0	0	380	0	0	602	0	0	339	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		31.0			31.0			31.0			31.0	
Actuated g/C Ratio		0.44			0.44			0.44			0.44	
v/c Ratio		0.09			0.28			0.43			0.26	
Control Delay		10.5			11.0			14.7			12.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.5			11.0			14.7			12.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			B			B	
Approach Delay		10.5			11.0			14.7			12.5	
Approach LOS		B			B			B			B	
Stops (vph)		52			173			353			174	
Fuel Used(gal)		1			4			5			3	
CO Emissions (g/hr)		63			249			330			235	
NOx Emissions (g/hr)		12			48			64			46	
VOC Emissions (g/hr)		15			58			76			55	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		13			43			90			44	
Queue Length 95th (ft)		26			71			130			70	
Internal Link Dist (ft)		213			610			193			605	
Turn Bay Length (ft)												
Base Capacity (vph)		1263			1376			1395			1300	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.09			0.28			0.43			0.26	

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 12.9 Intersection LOS: B
Intersection Capacity Utilization 46.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 39: William &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	114	380	602	339
v/c Ratio	0.09	0.28	0.43	0.26
Control Delay	10.5	11.0	14.7	12.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.5	11.0	14.7	12.5
Queue Length 50th (ft)	13	43	90	44
Queue Length 95th (ft)	26	71	130	70
Internal Link Dist (ft)	213	610	193	605
Turn Bay Length (ft)				
Base Capacity (vph)	1263	1376	1395	1300
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.09	0.28	0.43	0.26

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	542	16	0	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.996			
Flt Protected						
Satd. Flow (prot)	0	0	3525	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	0	3525	0	0	3539
Link Speed (mph)	30		30			30
Link Distance (ft)	329		351			273
Travel Time (s)	7.5		8.0			6.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	602	18	0	359
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	620	0	0	359
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	542	16	0	323
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	602	18	0	359
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						273
pX, platoon unblocked	0.98					
vC, conflicting volume	791	310			620	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	740	310			620	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	344	686			956	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	401	219	179	179
Volume Left	0	0	0	0
Volume Right	0	18	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.24	0.13	0.11	0.11
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS				
Approach Delay (s)	0.0		0.0	
Approach LOS				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	1	60	19	28	29	1	282	12	12	694	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.887			0.949			0.994			0.991	
Flt Protected		0.993			0.988						0.999	
Satd. Flow (prot)	0	1641	0	0	1713	0	0	3354	0	0	5034	0
Flt Permitted		0.959			0.917			0.954			0.934	
Satd. Flow (perm)	0	1585	0	0	1590	0	0	3199	0	0	4707	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67			32			10			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		433			549			728			701	
Travel Time (s)		9.8			12.5			16.5			15.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	12	1	67	21	31	32	1	313	13	13	771	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	80	0	0	84	0	0	327	0	0	832	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.0			8.0			58.8			58.8	
Actuated g/C Ratio		0.11			0.11			0.82			0.82	
v/c Ratio		0.34			0.41			0.13			0.22	
Control Delay		14.2			25.7			2.1			2.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.2			25.7			2.1			2.2	
LOS		B			C			A			A	
Approach Delay		14.2			25.7			2.1			2.2	
Approach LOS		B			C			A			A	
90th %ile Green (s)	11.0	11.0		11.0	11.0		51.0	51.0		51.0	51.0	
90th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR	MaxR	
70th %ile Green (s)	8.9	8.9		8.9	8.9		51.8	51.8		51.8	51.8	
70th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
50th %ile Green (s)	7.7	7.7		7.7	7.7		56.0	56.0		56.0	56.0	
50th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
30th %ile Green (s)	6.4	6.4		6.4	6.4		65.4	65.4		65.4	65.4	
30th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		66.0	66.0		66.0	66.0	
10th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	
Stops (vph)		23			47			58			153	
Fuel Used(gal)		1			1			2			5	
CO Emissions (g/hr)		40			69			148			369	
NOx Emissions (g/hr)		8			13			29			72	
VOC Emissions (g/hr)		9			16			34			85	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		5			22			12			24	
Queue Length 95th (ft)		39			57			26			43	
Internal Link Dist (ft)		353			469			648			621	
Turn Bay Length (ft)												
Base Capacity (vph)		511			487			2614			3848	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.16			0.17			0.13			0.22	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 72	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 4.4	Intersection LOS: A
Intersection Capacity Utilization 36.5%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 70	
70th %ile Actuated Cycle: 68.7	
50th %ile Actuated Cycle: 71.7	
30th %ile Actuated Cycle: 79.8	
10th %ile Actuated Cycle: 70	

Splits and Phases: 46: Delta Sonic & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	80	84	327	832
v/c Ratio	0.34	0.41	0.13	0.22
Control Delay	14.2	25.7	2.1	2.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.2	25.7	2.1	2.2
Queue Length 50th (ft)	5	22	12	24
Queue Length 95th (ft)	39	57	26	43
Internal Link Dist (ft)	353	469	648	621
Turn Bay Length (ft)				
Base Capacity (vph)	511	487	2614	3848
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.17	0.13	0.22

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1	2	16	1	20	2	338	12	9	753	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.932			0.928			0.995				
Flt Protected		0.988			0.979						0.999	
Satd. Flow (prot)	0	1715	0	0	1644	0	0	3357	0	0	5080	0
Flt Permitted		0.918			0.857			0.953			0.936	
Satd. Flow (perm)	0	1594	0	0	1439	0	0	3199	0	0	4760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			22			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			670			701			646	
Travel Time (s)		10.7			15.2			15.9			14.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	1	1	2	18	1	22	2	376	13	10	837	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	4	0	0	41	0	0	391	0	0	848	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.8			6.8			67.3			67.3	
Actuated g/C Ratio		0.09			0.09			0.88			0.88	
v/c Ratio		0.03			0.28			0.14			0.20	
Control Delay		27.2			25.3			1.4			1.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.2			25.3			1.4			1.5	
LOS		C			C			A			A	
Approach Delay		27.3			25.3			1.4			1.5	
Approach LOS		C			C			A			A	
90th %ile Green (s)	9.2	9.2		9.2	9.2		62.1	62.1		62.1	62.1	
90th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
70th %ile Green (s)	7.6	7.6		7.6	7.6		66.0	66.0		66.0	66.0	
70th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
50th %ile Green (s)	6.3	6.3		6.3	6.3		66.0	66.0		66.0	66.0	
50th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
30th %ile Green (s)	0.0	0.0		0.0	0.0		66.0	66.0		66.0	66.0	
30th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0		66.0	66.0		66.0	66.0	
10th %ile Term Code	Skip	Skip		Skip	Skip		Dwell	Dwell		Dwell	Dwell	
Stops (vph)		5			21			47			105	
Fuel Used(gal)		0			0			2			5	
CO Emissions (g/hr)		5			35			160			325	
NOx Emissions (g/hr)		1			7			31			63	
VOC Emissions (g/hr)		1			8			37			75	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		1			9			13			21	
Queue Length 95th (ft)		10			37			26			38	
Internal Link Dist (ft)		389			590			621			566	
Turn Bay Length (ft)												
Base Capacity (vph)		443			414			2825			4202	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.01			0.10			0.14			0.20	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 76.2	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 2.3	Intersection LOS: A
Intersection Capacity Utilization 31.2%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 79.3	
70th %ile Actuated Cycle: 81.6	
50th %ile Actuated Cycle: 80.3	
30th %ile Actuated Cycle: 70	
10th %ile Actuated Cycle: 70	

Splits and Phases: 48: Enterprise & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	4	41	391	848
v/c Ratio	0.03	0.28	0.14	0.20
Control Delay	27.2	25.3	1.4	1.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.2	25.3	1.4	1.5
Queue Length 50th (ft)	1	9	13	21
Queue Length 95th (ft)	10	37	26	38
Internal Link Dist (ft)	389	590	621	566
Turn Bay Length (ft)				
Base Capacity (vph)	443	414	2825	4202
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.01	0.10	0.14	0.20

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	42	44	29	91	24	43	286	38	27	667	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.951			0.977			0.985			0.977	
Flt Protected		0.986			0.990			0.994			0.998	
Satd. Flow (prot)	0	1681	0	0	1686	0	0	3273	0	0	4910	0
Flt Permitted		0.851			0.927			0.803			0.919	
Satd. Flow (perm)	0	1451	0	0	1579	0	0	2644	0	0	4522	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			12			30			91	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		680			925			646			1583	
Travel Time (s)		15.5			21.0			14.7			36.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	9%	9%	9%	8%	8%	8%	3%	3%	3%
Adj. Flow (vph)	38	47	49	32	101	27	48	318	42	30	741	141
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	134	0	0	160	0	0	408	0	0	912	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		12.2			12.2			54.3			54.3	
Actuated g/C Ratio		0.16			0.16			0.73			0.73	
v/c Ratio		0.50			0.59			0.21			0.27	
Control Delay		26.2			35.0			3.7			3.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.2			35.0			3.7			3.6	
LOS		C			C			A			A	
Approach Delay		26.2			35.0			3.7			3.6	
Approach LOS		C			C			A			A	
90th %ile Green (s)	17.5	17.5		17.5	17.5		51.0	51.0		51.0	51.0	
90th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR	MaxR	
70th %ile Green (s)	14.1	14.1		14.1	14.1		51.0	51.0		51.0	51.0	
70th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR	MaxR	
50th %ile Green (s)	11.9	11.9		11.9	11.9		51.0	51.0		51.0	51.0	
50th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR	MaxR	
30th %ile Green (s)	9.9	9.9		9.9	9.9		52.8	52.8		52.8	52.8	
30th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
10th %ile Green (s)	7.4	7.4		7.4	7.4		66.0	66.0		66.0	66.0	
10th %ile Term Code	Hold	Hold		Gap	Gap		Dwell	Dwell		Dwell	Dwell	
Stops (vph)		79			119			102			228	
Fuel Used(gal)		2			3			3			12	
CO Emissions (g/hr)		120			190			188			839	
NOx Emissions (g/hr)		23			37			37			163	
VOC Emissions (g/hr)		28			44			44			194	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		39			60			22			35	
Queue Length 95th (ft)		88			116			48			67	
Internal Link Dist (ft)		600			845			566			1503	
Turn Bay Length (ft)												
Base Capacity (vph)		435			455			1934			3318	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.31			0.35			0.21			0.27	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 74.5	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 76.5	
70th %ile Actuated Cycle: 73.1	
50th %ile Actuated Cycle: 70.9	
30th %ile Actuated Cycle: 70.7	
10th %ile Actuated Cycle: 81.4	

Splits and Phases: 50: Utica & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	134	160	408	912
v/c Ratio	0.50	0.59	0.21	0.27
Control Delay	26.2	35.0	3.7	3.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.2	35.0	3.7	3.6
Queue Length 50th (ft)	39	60	22	35
Queue Length 95th (ft)	88	116	48	67
Internal Link Dist (ft)	600	845	566	1503
Turn Bay Length (ft)				
Base Capacity (vph)	435	455	1934	3318
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.35	0.21	0.27

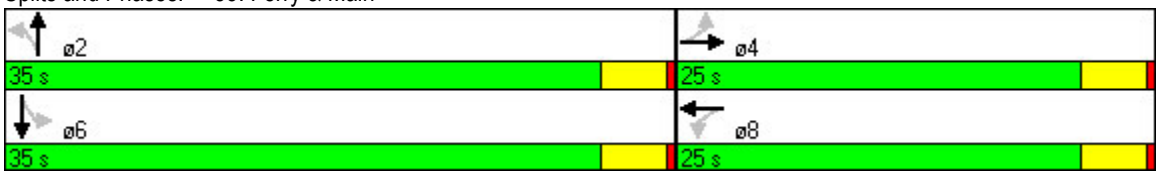
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	140	125	90	159	2	43	251	40	1	616	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.949			0.999			0.982			0.988	
Flt Protected		0.986			0.982			0.994				
Satd. Flow (prot)	0	3217	0	0	3310	0	0	3233	0	0	4975	0
Flt Permitted		0.788			0.685			0.833			0.940	
Satd. Flow (perm)	0	2571	0	0	2309	0	0	2709	0	0	4677	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		139			1			36			35	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1430			1674			1583			565	
Travel Time (s)		32.5			38.0			36.0			12.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	9%	9%	9%	3%	3%	3%
Adj. Flow (vph)	112	156	139	100	177	2	48	279	44	1	684	60
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	407	0	0	279	0	0	371	0	0	745	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		11.1			11.1			31.1			31.1	
Actuated g/C Ratio		0.22			0.22			0.62			0.62	
v/c Ratio		0.60			0.55			0.22			0.26	
Control Delay		15.2			21.4			4.7			4.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.2			21.4			4.7			4.8	
LOS		B			C			A			A	
Approach Delay		15.2			21.4			4.7			4.8	
Approach LOS		B			C			A			A	
90th %ile Green (s)	16.3	16.3		16.3	16.3		31.0	31.0		31.0	31.0	
90th %ile Term Code	Gap	Gap		Hold	Hold		MaxR	MaxR		MaxR	MaxR	
70th %ile Green (s)	12.4	12.4		12.4	12.4		31.0	31.0		31.0	31.0	
70th %ile Term Code	Gap	Gap		Hold	Hold		MaxR	MaxR		MaxR	MaxR	
50th %ile Green (s)	10.7	10.7		10.7	10.7		31.0	31.0		31.0	31.0	
50th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR	MaxR	
30th %ile Green (s)	9.3	9.3		9.3	9.3		31.0	31.0		31.0	31.0	
30th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR	MaxR	
10th %ile Green (s)	7.4	7.4		7.4	7.4		31.0	31.0		31.0	31.0	
10th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR	MaxR	
Stops (vph)		199			202			120			255	
Fuel Used(gal)		6			5			5			5	
CO Emissions (g/hr)		441			383			357			351	
NOx Emissions (g/hr)		86			75			69			68	
VOC Emissions (g/hr)		102			89			83			81	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		36			37			17			27	
Queue Length 95th (ft)		70			67			43			56	
Internal Link Dist (ft)		1350			1594			1503			485	
Turn Bay Length (ft)												
Base Capacity (vph)		1160			969			1692			2910	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.35			0.29			0.22			0.26	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 50.2	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 53.8%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 55.3	
70th %ile Actuated Cycle: 51.4	
50th %ile Actuated Cycle: 49.7	
30th %ile Actuated Cycle: 48.3	
10th %ile Actuated Cycle: 46.4	

Splits and Phases: 53: Ferry & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	407	279	371	745
v/c Ratio	0.60	0.55	0.22	0.26
Control Delay	15.2	21.4	4.7	4.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.2	21.4	4.7	4.8
Queue Length 50th (ft)	36	37	17	27
Queue Length 95th (ft)	70	67	43	56
Internal Link Dist (ft)	1350	1594	1503	485
Turn Bay Length (ft)				
Base Capacity (vph)	1160	969	1692	2910
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.29	0.22	0.26

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	11	31	123	183	322	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.900				0.984	
Flt Protected	0.987			0.980		
Satd. Flow (prot)	1655	0	0	1825	1833	0
Flt Permitted	0.987			0.980		
Satd. Flow (perm)	1655	0	0	1825	1833	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1107			363	330	
Travel Time (s)	25.2			8.3	7.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	12	34	137	203	358	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	46	0	0	340	407	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	11	31	123	183	322	44
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	12	34	137	203	358	49
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				363	330	
pX, platoon unblocked						
vC, conflicting volume	859	382	407			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	859	382	407			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	95	88			
cM capacity (veh/h)	288	665	1152			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	47	340	407
Volume Left	12	137	0
Volume Right	34	0	49
cSH	495	1152	1700
Volume to Capacity	0.09	0.12	0.24
Queue Length 95th (ft)	8	10	0
Control Delay (s)	13.0	4.1	0.0
Lane LOS	B	A	
Approach Delay (s)	13.0	4.1	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				↑↑↑↑	↖↖	
Volume (vph)	0	0	0	1842	512	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	6408	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	6408	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	339			382	585	
Travel Time (s)	7.7			8.7	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	2047	569	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	2047	569	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 68.2%		ICU Level of Service C	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	1842	512	0
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)	0	0	0	2047	569	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)	339			382		
pX, platoon unblocked					0.75	
vC, conflicting volume			0		512	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
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		26	100
cM capacity (veh/h)			1622		767	1084

Direction, Lane #	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	512	512	512	512	284	284
Volume Left	0	0	0	0	284	284
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	767	767
Volume to Capacity	0.30	0.30	0.30	0.30	0.37	0.37
Queue Length 95th (ft)	0	0	0	0	43	43
Control Delay (s)	0.0	0.0	0.0	0.0	12.4	12.4
Lane LOS					B	B
Approach Delay (s)	0.0				12.4	
Approach LOS					B	

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	119	2094	167	0	0	0	0	40	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.989						0.956	
Flt Protected					0.998							
Satd. Flow (prot)	0	0	0	0	6325	0	0	0	0	0	1781	0
Flt Permitted					0.998							
Satd. Flow (perm)	0	0	0	0	6325	0	0	0	0	0	1781	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					56						5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	132	2327	186	0	0	0	0	44	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2645	0	0	0	0	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.4	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.5	50.5						25.6	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.2	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.4	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					51.5						26.6	
Actuated g/C Ratio					0.61						0.31	
v/c Ratio					0.69						0.12	
Control Delay					12.2						20.3	
Queue Delay					0.0						0.0	
Total Delay					12.2						20.3	
LOS					B						C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					12.2						20.3	
Approach LOS					B						C	
Stops (vph)					1461						37	
Fuel Used(gal)					20						1	
CO Emissions (g/hr)					1417						64	
NOx Emissions (g/hr)					276						12	
VOC Emissions (g/hr)					328						15	
Dilemma Vehicles (#)					0						0	
Queue Length 50th (ft)					245						23	
Queue Length 95th (ft)					285						51	
Internal Link Dist (ft)		295			259			605			505	
Turn Bay Length (ft)												
Base Capacity (vph)					3854						561	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					0.69						0.12	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green
Natural Cycle: 50
Control Type: Pretimed
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 12.4 Intersection LOS: B
Intersection Capacity Utilization 44.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 66: Goodell & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	2645	65
v/c Ratio	0.69	0.12
Control Delay	12.2	20.3
Queue Delay	0.0	0.0
Total Delay	12.2	20.3
Queue Length 50th (ft)	245	23
Queue Length 95th (ft)	285	51
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3854	561
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.69	0.12

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	56	22	32	67	7	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.962				0.925	
Flt Protected				0.984	0.978	
Satd. Flow (prot)	1792	0	0	1833	1685	0
Flt Permitted				0.984	0.978	
Satd. Flow (perm)	1792	0	0	1833	1685	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	293			342	645	
Travel Time (s)	6.7			7.8	14.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	62	24	36	74	8	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	86	0	0	110	18	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	56	22	32	67	7	9
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)	62	24	36	74	8	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)	293			342		
pX, platoon unblocked						
vC, conflicting volume			87		220	74
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			87		220	74
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		99	99
cM capacity (veh/h)			1509		750	987

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	87	110	18
Volume Left	0	36	8
Volume Right	24	0	10
cSH	1700	1509	867
Volume to Capacity	0.05	0.02	0.02
Queue Length 95th (ft)	0	2	2
Control Delay (s)	0.0	2.5	9.2
Lane LOS		A	A
Approach Delay (s)	0.0	2.5	9.2
Approach LOS			A

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

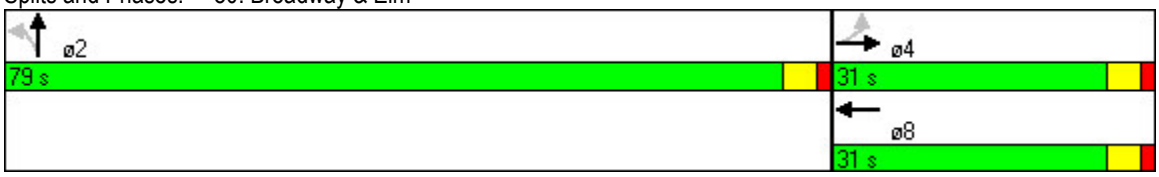
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	66	0	0	218	26	134	1930	58	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.984			0.996				
Flt Protected		0.982						0.997				
Satd. Flow (prot)	0	3476	0	0	3483	0	0	5050	0	0	0	0
Flt Permitted		0.786						0.997				
Satd. Flow (perm)	0	2782	0	0	3483	0	0	5050	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			219			461			734	
Travel Time (s)		9.5			5.0			10.5			16.7	
Peak Hour Factor	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)	43	73	0	0	242	29	149	2144	64	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	116	0	0	271	0	0	2357	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	23.0	23.0			23.0		41.0	41.0				
Total Split (s)	31.0	31.0	0.0	0.0	31.0	0.0	79.0	79.0	0.0	0.0	0.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	0.0%	28.2%	0.0%	71.8%	71.8%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	26.3	26.3			26.3		74.3	74.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		27.3			27.3			75.3				
Actuated g/C Ratio		0.25			0.25			0.68				
v/c Ratio		0.17			0.31			0.68				
Control Delay		33.3			33.4			2.4				
Queue Delay		0.0			0.0			0.1				
Total Delay		33.3			33.4			2.5				
LOS		C			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		33.3			33.4			2.5				
Approach LOS		C			C			A				
Stops (vph)		80			185			120				
Fuel Used(gal)		1			4			9				
CO Emissions (g/hr)		104			254			653				
NOx Emissions (g/hr)		20			49			127				
VOC Emissions (g/hr)		24			59			151				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		33			78			36				
Queue Length 95th (ft)		58			116			37				
Internal Link Dist (ft)		339			139			381			654	
Turn Bay Length (ft)												
Base Capacity (vph)		690			873			3459				
Starvation Cap Reductn		0			0			156				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.17			0.31			0.71				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 41 (37%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 6.9 Intersection LOS: A
Intersection Capacity Utilization 61.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 80: Broadway & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	116	271	2357
v/c Ratio	0.17	0.31	0.68
Control Delay	33.3	33.4	2.4
Queue Delay	0.0	0.0	0.1
Total Delay	33.3	33.4	2.5
Queue Length 50th (ft)	33	78	36
Queue Length 95th (ft)	58	116	37
Internal Link Dist (ft)	339	139	381
Turn Bay Length (ft)			
Base Capacity (vph)	690	873	3459
Starvation Cap Reductn	0	0	156
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.17	0.31	0.71

Intersection Summary

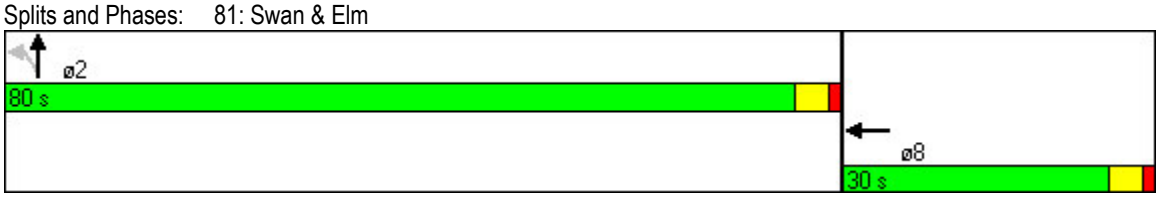
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	188	99	471	2679	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.91	1.00	1.00	1.00
Frt					0.957			0.998				
Flt Protected							0.950	0.999				
Satd. Flow (prot)	0	0	0	0	1818	0	1552	4887	0	0	0	0
Flt Permitted							0.950	0.999				
Satd. Flow (perm)	0	0	0	0	1818	0	1552	4887	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					1		273	10				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			208			801			316	
Travel Time (s)		8.2			4.7			18.2			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.71	0.81	0.76	0.81	0.88	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	0	0	265	122	620	3307	57	0	0	0
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	0	0	0	0	387	0	558	3426	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					21.2		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	80.0	80.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	27.3%	0.0%	72.7%	72.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		75.4	75.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					20		22	22				
Act Effct Green (s)					27.4		77.4	77.4				
Actuated g/C Ratio					0.25		0.70	0.70				
v/c Ratio					0.85		0.48	1.00				
Control Delay					58.2		4.8	30.9				
Queue Delay					0.0		0.0	0.0				
Total Delay					58.2		4.8	30.9				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E		A	C				
Approach Delay					58.2			27.3				
Approach LOS					E			C				
Stops (vph)					256		90	2293				
Fuel Used(gal)					5		4	47				
CO Emissions (g/hr)					369		249	3320				
NOx Emissions (g/hr)					72		48	646				
VOC Emissions (g/hr)					86		58	769				
Dilemma Vehicles (#)					0		0	0				
Queue Length 50th (ft)					261		75	818				
Queue Length 95th (ft)					277		89	674				
Internal Link Dist (ft)		279			128			721			236	
Turn Bay Length (ft)												
Base Capacity (vph)					454		1173	3442				
Starvation Cap Reductn					0		0	0				
Spillback Cap Reductn					0		0	0				
Storage Cap Reductn					0		0	0				
Reduced v/c Ratio					0.85		0.48	1.00				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Pretimed
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 30.0 Intersection LOS: C
Intersection Capacity Utilization 69.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 81: Swan & Elm



Lane Group	WBT	NBL	NBT
Lane Group Flow (vph)	387	558	3426
v/c Ratio	0.85	0.48	1.00
Control Delay	58.2	4.8	30.9
Queue Delay	0.0	0.0	0.0
Total Delay	58.2	4.8	30.9
Queue Length 50th (ft)	261	75	818
Queue Length 95th (ft)	277	89	674
Internal Link Dist (ft)	128		721
Turn Bay Length (ft)			
Base Capacity (vph)	454	1173	3442
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.85	0.48	1.00

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	76	0	59	257	0	0	0	0	47	1701	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt											0.996	
Flt Protected					0.991						0.999	
Satd. Flow (prot)	0	3539	0	0	3507	0	0	0	0	0	5060	0
Flt Permitted					0.884						0.999	
Satd. Flow (perm)	0	3539	0	0	3129	0	0	0	0	0	5060	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			419			255			685	
Travel Time (s)		5.1			9.5			5.8			15.6	
Peak Hour Factor	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)	0	84	0	66	286	0	0	0	0	52	1890	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	352	0	0	0	0	0	1994	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		24.0		24.0	24.0					41.0	41.0	
Total Split (s)	0.0	31.0	0.0	31.0	31.0	0.0	0.0	0.0	0.0	49.0	49.0	0.0
Total Split (%)	0.0%	38.8%	0.0%	38.8%	38.8%	0.0%	0.0%	0.0%	0.0%	61.3%	61.3%	0.0%
Maximum Green (s)		26.3		26.3	26.3					44.3	44.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		27.3			27.3						45.3	
Actuated g/C Ratio		0.34			0.34						0.57	
v/c Ratio		0.07			0.33						0.70	
Control Delay		18.1			20.6						6.1	
Queue Delay		0.0			0.0						0.0	
Total Delay		18.1			20.6						6.1	
LOS		B			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.1			20.6						6.1	
Approach LOS		B			C						A	
Stops (vph)		50			224						339	
Fuel Used(gal)		1			4						14	
CO Emissions (g/hr)		48			252						958	
NOx Emissions (g/hr)		9			49						186	
VOC Emissions (g/hr)		11			58						222	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		14			67						73	
Queue Length 95th (ft)		30			102						84	
Internal Link Dist (ft)		146			339			175			605	
Turn Bay Length (ft)												
Base Capacity (vph)		1208			1068						2869	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						10	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.07			0.33						0.70	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 39 (49%), Referenced to phase 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 53.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 82: Broadway & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	84	352	1994
v/c Ratio	0.07	0.33	0.70
Control Delay	18.1	20.6	6.1
Queue Delay	0.0	0.0	0.0
Total Delay	18.1	20.6	6.1
Queue Length 50th (ft)	14	67	73
Queue Length 95th (ft)	30	102	84
Internal Link Dist (ft)	146	339	605
Turn Bay Length (ft)			
Base Capacity (vph)	1208	1068	2869
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	10
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.07	0.33	0.70

Intersection Summary

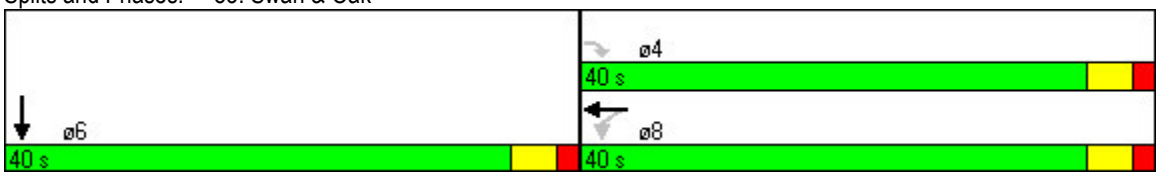
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	33	79	641	0	0	0	0	0	1043	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.86	0.86
Frt			0.850								0.992	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			61	34							18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			359			115			332	
Travel Time (s)		8.0			8.2			2.6			7.5	
Peak Hour Factor	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)	0	0	37	88	712	0	0	0	0	0	1159	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	37	88	712	0	0	0	0	0	1223	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			custom	Perm								
Protected Phases					8						6	
Permitted Phases			4	8								
Minimum Split (s)			20.8	20.8	20.8						40.0	
Total Split (s)	0.0	0.0	40.0	40.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Total Split (%)	0.0%	0.0%	50.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
Maximum Green (s)			35.2	35.2	35.2						35.2	
Yellow Time (s)			3.2	3.2	3.2						3.2	
All-Red Time (s)			1.6	1.6	1.6						1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.8	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)			5.0	5.0	5.0						5.0	
Flash Dont Walk (s)			11.0	11.0	11.0						11.0	
Pedestrian Calls (#/hr)			0	0	0						0	
Act Effct Green (s)			36.2	36.2	36.2						36.2	
Actuated g/C Ratio			0.45	0.45	0.45						0.45	
v/c Ratio			0.03	0.11	0.44						0.42	
Control Delay			1.7	8.8	16.1						7.5	
Queue Delay			0.0	0.0	0.5						0.0	
Total Delay			1.7	8.8	16.7						7.5	
LOS			A	A	B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					15.8						7.5	
Approach LOS					B						A	
Stops (vph)			3	29	416						226	
Fuel Used(gal)			0	1	6						6	
CO Emissions (g/hr)			8	37	433						404	
NOx Emissions (g/hr)			2	7	84						79	
VOC Emissions (g/hr)			2	8	100						94	
Dilemma Vehicles (#)			0	0	0						0	
Queue Length 50th (ft)			0	15	123						36	
Queue Length 95th (ft)			5	40	168						57	
Internal Link Dist (ft)		272			279			35			252	
Turn Bay Length (ft)												
Base Capacity (vph)			1295	820	1601						2886	
Starvation Cap Reductn			0	0	474						0	
Spillback Cap Reductn			0	0	0						0	
Storage Cap Reductn			0	0	0						0	
Reduced v/c Ratio			0.03	0.11	0.63						0.42	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 75 (94%), Referenced to phase 6:SBT, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 10.6 Intersection LOS: B
Intersection Capacity Utilization 69.4% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 83: Swan & Oak



Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	37	88	712	1223
v/c Ratio	0.03	0.11	0.44	0.42
Control Delay	1.7	8.8	16.1	7.5
Queue Delay	0.0	0.0	0.5	0.0
Total Delay	1.7	8.8	16.7	7.5
Queue Length 50th (ft)	0	15	123	36
Queue Length 95th (ft)	5	40	168	57
Internal Link Dist (ft)			279	252
Turn Bay Length (ft)				
Base Capacity (vph)	1295	820	1601	2886
Starvation Cap Reductn	0	0	474	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.03	0.11	0.63	0.42

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	64	44	40	175	0	0	0	0	46	1985	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.945									0.993	
Flt Protected					0.991						0.999	
Satd. Flow (prot)	0	1760	0	0	1846	0	0	0	0	0	5045	0
Flt Permitted					0.926						0.999	
Satd. Flow (perm)	0	1760	0	0	1725	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12									20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			458			685			413	
Travel Time (s)		10.0			10.4			15.6			9.4	
Peak Hour Factor	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)	0	71	49	44	194	0	0	0	0	51	2206	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	120	0	0	238	0	0	0	0	0	2368	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	23.0	0.0	23.0	23.0	0.0	0.0	0.0	0.0	57.0	57.0	0.0
Total Split (%)	0.0%	28.8%	0.0%	28.8%	28.8%	0.0%	0.0%	0.0%	0.0%	71.3%	71.3%	0.0%
Maximum Green (s)		18.3		18.3	18.3					52.3	52.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		19.3			19.3						53.3	
Actuated g/C Ratio		0.24			0.24						0.67	
v/c Ratio		0.28			0.57						0.70	
Control Delay		24.2			33.0						5.5	
Queue Delay		0.0			0.0						0.0	
Total Delay		24.2			33.0						5.5	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		24.2			33.0						5.5	
Approach LOS		C			C						A	
Stops (vph)		77			185						1173	
Fuel Used(gal)		1			3						22	
CO Emissions (g/hr)		93			226						1505	
NOx Emissions (g/hr)		18			44						293	
VOC Emissions (g/hr)		22			52						349	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		44			105						38	
Queue Length 95th (ft)		88			177						43	
Internal Link Dist (ft)		360			378			605			333	
Turn Bay Length (ft)												
Base Capacity (vph)		434			416						3368	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.28			0.57						0.70	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 29 (36%), Referenced to phase 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 8.7 Intersection LOS: A
Intersection Capacity Utilization 66.3% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 84: Huron & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	120	238	2368
v/c Ratio	0.28	0.57	0.70
Control Delay	24.2	33.0	5.5
Queue Delay	0.0	0.0	0.0
Total Delay	24.2	33.0	5.5
Queue Length 50th (ft)	44	105	38
Queue Length 95th (ft)	88	177	43
Internal Link Dist (ft)	360	378	333
Turn Bay Length (ft)			
Base Capacity (vph)	434	416	3368
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.28	0.57	0.70

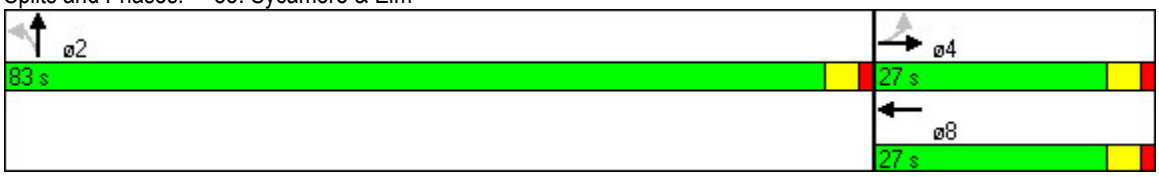
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	41	0	0	99	13	101	1851	43	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.985			0.997				
Flt Protected		0.977						0.997				
Satd. Flow (prot)	0	1820	0	0	1835	0	0	5055	0	0	0	0
Flt Permitted		0.830						0.997				
Satd. Flow (perm)	0	1546	0	0	1835	0	0	5055	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		458			194			734			350	
Travel Time (s)		10.4			4.4			16.7			8.0	
Peak Hour Factor	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)	41	46	0	0	110	14	112	2057	48	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	87	0	0	124	0	0	2217	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.7	20.7			20.7		45.0	45.0				
Total Split (s)	27.0	27.0	0.0	0.0	27.0	0.0	83.0	83.0	0.0	0.0	0.0	0.0
Total Split (%)	24.5%	24.5%	0.0%	0.0%	24.5%	0.0%	75.5%	75.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	22.3	22.3			22.3		78.3	78.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		23.3			23.3			79.3				
Actuated g/C Ratio		0.21			0.21			0.72				
v/c Ratio		0.27			0.32			0.61				
Control Delay		38.8			37.7			2.3				
Queue Delay		0.0			0.0			0.2				
Total Delay		38.8			37.7			2.5				
LOS		D			D			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		38.8			37.7			2.5				
Approach LOS		D			D			A				
Stops (vph)		64			89			603				
Fuel Used(gal)		1			2			16				
CO Emissions (g/hr)		87			124			1097				
NOx Emissions (g/hr)		17			24			214				
VOC Emissions (g/hr)		20			29			254				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		52			71			37				
Queue Length 95th (ft)		99			127			42				
Internal Link Dist (ft)		378			114			654			270	
Turn Bay Length (ft)												
Base Capacity (vph)		327			393			3646				
Starvation Cap Reductn		0			0			497				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.27			0.32			0.70				

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 64 (58%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 85: Sycamore & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	87	124	2217
v/c Ratio	0.27	0.32	0.61
Control Delay	38.8	37.7	2.3
Queue Delay	0.0	0.0	0.2
Total Delay	38.8	37.7	2.5
Queue Length 50th (ft)	52	71	37
Queue Length 95th (ft)	99	127	42
Internal Link Dist (ft)	378	114	654
Turn Bay Length (ft)			
Base Capacity (vph)	327	393	3646
Starvation Cap Reductn	0	0	497
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.27	0.32	0.70

Intersection Summary

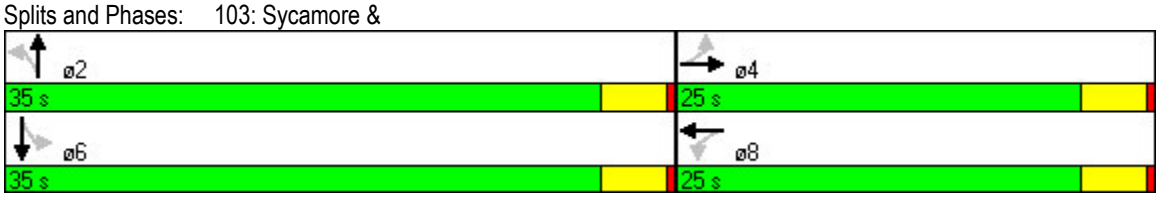
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	43	16	16	64	23	29	498	25	15	313	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.973			0.969			0.993			0.992	
Flt Protected		0.987			0.992			0.997			0.998	
Satd. Flow (prot)	0	1721	0	0	1691	0	0	3470	0	0	3404	0
Flt Permitted		0.926			0.961			0.924			0.926	
Satd. Flow (perm)	0	1615	0	0	1638	0	0	3216	0	0	3158	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			26			12			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			600			803			878	
Travel Time (s)		6.5			13.6			18.3			20.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	8%	8%	8%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	24	48	18	18	71	26	32	553	28	17	348	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	90	0	0	115	0	0	613	0	0	385	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.16			0.19			0.37			0.24	
Control Delay		12.1			11.9			7.0			8.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.1			11.9			7.0			8.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		12.1			11.9			7.0			8.1	
Approach LOS		B			B			A			A	
Stops (vph)		44			56			196			168	
Fuel Used(gal)		1			1			5			4	
CO Emissions (g/hr)		52			73			373			270	
NOx Emissions (g/hr)		10			14			72			53	
VOC Emissions (g/hr)		12			17			86			63	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		17			22			47			35	
Queue Length 95th (ft)		44			53			63			56	
Internal Link Dist (ft)		208			520			723			798	
Turn Bay Length (ft)												
Base Capacity (vph)		577			590			1667			1638	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.16			0.19			0.37			0.24	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.37
Intersection Signal Delay: 8.2 Intersection LOS: A
Intersection Capacity Utilization 42.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 103: Sycamore &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	90	115	613	385
v/c Ratio	0.16	0.19	0.37	0.24
Control Delay	12.1	11.9	7.0	8.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.1	11.9	7.0	8.1
Queue Length 50th (ft)	17	22	47	35
Queue Length 95th (ft)	44	53	63	56
Internal Link Dist (ft)	208	520	723	798
Turn Bay Length (ft)				
Base Capacity (vph)	577	590	1667	1638
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.19	0.37	0.24

Intersection Summary

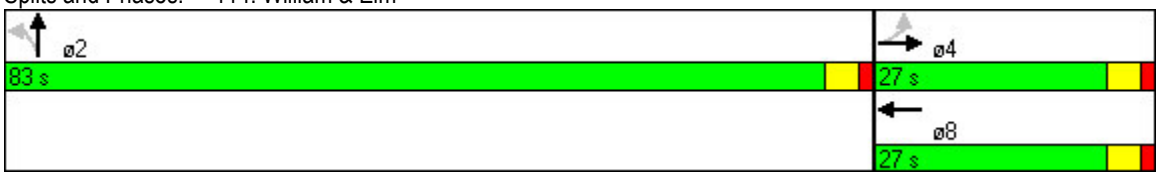
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	53	0	0	189	35	156	2096	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.977			0.999				
Flt Protected		0.994						0.997				
Satd. Flow (prot)	0	3518	0	0	3458	0	0	5065	0	0	0	0
Flt Permitted		0.917						0.997				
Satd. Flow (perm)	0	3245	0	0	3458	0	0	5065	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					13			3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		371			191			308			461	
Travel Time (s)		8.4			4.3			7.0			10.5	
Peak Hour Factor	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)	8	59	0	0	210	39	173	2329	22	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	249	0	0	2524	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	27.0	27.0	0.0	0.0	27.0	0.0	83.0	83.0	0.0	0.0	0.0	0.0
Total Split (%)	24.5%	24.5%	0.0%	0.0%	24.5%	0.0%	75.5%	75.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	22.3	22.3			22.3		78.3	78.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		23.3			23.3			79.3				
Actuated g/C Ratio		0.21			0.21			0.72				
v/c Ratio		0.10			0.34			0.69				
Control Delay		35.4			36.3			2.3				
Queue Delay		0.0			0.0			0.1				
Total Delay		35.4			36.3			2.5				
LOS		D			D			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.4			36.3			2.5				
Approach LOS		D			D			A				
Stops (vph)		46			176			352				
Fuel Used(gal)		1			3			8				
CO Emissions (g/hr)		60			243			592				
NOx Emissions (g/hr)		12			47			115				
VOC Emissions (g/hr)		14			56			137				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		20			74			27				
Queue Length 95th (ft)		40			112			30				
Internal Link Dist (ft)		291			111			228			381	
Turn Bay Length (ft)												
Base Capacity (vph)		687			743			3652				
Starvation Cap Reductn		0			0			279				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.10			0.34			0.75				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 35 (32%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 6.2 Intersection LOS: A
Intersection Capacity Utilization 57.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 114: William & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	67	249	2524
v/c Ratio	0.10	0.34	0.69
Control Delay	35.4	36.3	2.3
Queue Delay	0.0	0.0	0.1
Total Delay	35.4	36.3	2.5
Queue Length 50th (ft)	20	74	27
Queue Length 95th (ft)	40	112	30
Internal Link Dist (ft)	291	111	228
Turn Bay Length (ft)			
Base Capacity (vph)	687	743	3652
Starvation Cap Reductn	0	0	279
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.10	0.34	0.75

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	31	11	36	234	0	0	0	0	76	1733	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.961										
Flt Protected					0.993						0.998	
Satd. Flow (prot)	0	3401	0	0	3514	0	0	0	0	0	5075	0
Flt Permitted					0.914						0.998	
Satd. Flow (perm)	0	3401	0	0	3235	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		507			371			297			255	
Travel Time (s)		11.5			8.4			6.8			5.8	
Peak Hour Factor	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)	0	34	12	40	260	0	0	0	0	84	1926	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	46	0	0	300	0	0	0	0	0	2013	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	25.0	0.0	25.0	25.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	31.3%	0.0%	31.3%	31.3%	0.0%	0.0%	0.0%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)		20.3		20.3	20.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		21.3			21.3						51.3	
Actuated g/C Ratio		0.27			0.27						0.64	
v/c Ratio		0.05			0.35						0.62	
Control Delay		17.7			25.1						1.7	
Queue Delay		0.0			0.0						0.2	
Total Delay		17.7			25.1						1.9	
LOS		B			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.7			25.1						1.9	
Approach LOS		B			C						A	
Stops (vph)		24			211						170	
Fuel Used(gal)		0			3						5	
CO Emissions (g/hr)		31			233						361	
NOx Emissions (g/hr)		6			45						70	
VOC Emissions (g/hr)		7			54						84	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		6			63						13	
Queue Length 95th (ft)		19			98						16	
Internal Link Dist (ft)		427			291			217			175	
Turn Bay Length (ft)												
Base Capacity (vph)		914			861						3255	
Starvation Cap Reductn		0			0						459	
Spillback Cap Reductn		0			0						50	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.05			0.35						0.72	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 45 (56%), Referenced to phase 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 5.2 Intersection LOS: A
Intersection Capacity Utilization 52.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 115: William & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	46	300	2013
v/c Ratio	0.05	0.35	0.62
Control Delay	17.7	25.1	1.7
Queue Delay	0.0	0.0	0.2
Total Delay	17.7	25.1	1.9
Queue Length 50th (ft)	6	63	13
Queue Length 95th (ft)	19	98	16
Internal Link Dist (ft)	427	291	175
Turn Bay Length (ft)			
Base Capacity (vph)	914	861	3255
Starvation Cap Reductn	0	0	459
Spillback Cap Reductn	0	0	50
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.05	0.35	0.72

Intersection Summary

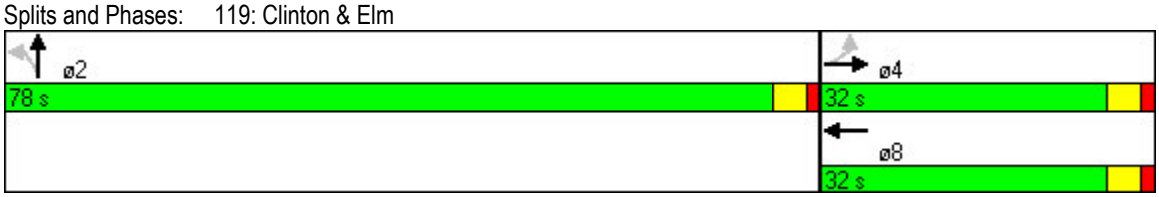
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	86	0	0	91	39	20	2253	33	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.951			0.997				
Flt Protected		0.988						0.999				
Satd. Flow (prot)	0	1835	0	0	1807	0	0	5021	0	0	0	0
Flt Permitted		0.898						0.999				
Satd. Flow (perm)	0	1668	0	0	1807	0	0	5021	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					9			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			191			734			308	
Travel Time (s)		8.2			4.3			16.7			7.0	
Peak Hour Factor	0.68	0.78	0.90	0.90	0.73	0.54	0.58	0.94	0.58	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	2%	2%	0%	0%	0%	3%	0%	2%	2%	2%
Adj. Flow (vph)	35	110	0	0	125	72	34	2397	57	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	145	0	0	197	0	0	2488	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	32.0	32.0	0.0	0.0	32.0	0.0	78.0	78.0	0.0	0.0	0.0	0.0
Total Split (%)	29.1%	29.1%	0.0%	0.0%	29.1%	0.0%	70.9%	70.9%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	27.3	27.3			27.3		73.3	73.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.7	2.7	3.0	3.0	2.7	3.0	2.7	2.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			75.3				
Actuated g/C Ratio		0.27			0.27			0.68				
v/c Ratio		0.33			0.40			0.72				
Control Delay		34.9			34.6			2.3				
Queue Delay		0.0			0.0			0.1				
Total Delay		34.9			34.6			2.4				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		C			C			A				
Approach Delay		34.9			34.6			2.4				
Approach LOS		C			C			A				
Stops (vph)		86			100			343				
Fuel Used(gal)		2			2			16				
CO Emissions (g/hr)		109			116			1129				
NOx Emissions (g/hr)		21			23			220				
VOC Emissions (g/hr)		25			27			262				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		82			109			25				
Queue Length 95th (ft)		119			138			26				
Internal Link Dist (ft)		279			111			654			228	
Turn Bay Length (ft)												
Base Capacity (vph)		444			488			3439				
Starvation Cap Reductn		0			0			142				
Spillback Cap Reductn		0			0			71				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.33			0.40			0.75				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 28 (25%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 6.3 — Intersection LOS: A
Intersection Capacity Utilization 67.7% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 119: Clinton & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	145	197	2488
v/c Ratio	0.33	0.40	0.72
Control Delay	34.9	34.6	2.3
Queue Delay	0.0	0.0	0.1
Total Delay	34.9	34.6	2.4
Queue Length 50th (ft)	82	109	25
Queue Length 95th (ft)	119	138	26
Internal Link Dist (ft)	279	111	654
Turn Bay Length (ft)			
Base Capacity (vph)	444	488	3439
Starvation Cap Reductn	0	0	142
Spillback Cap Reductn	0	0	71
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.33	0.40	0.75

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	76	39	28	114	0	0	0	0	44	1635	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.954									0.993	
Flt Protected					0.990						0.999	
Satd. Flow (prot)	0	1777	0	0	1844	0	0	0	0	0	5045	0
Flt Permitted					0.935						0.999	
Satd. Flow (perm)	0	1777	0	0	1742	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12									16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		520			359			762			297	
Travel Time (s)		11.8			8.2			17.3			6.8	
Peak Hour Factor	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)	0	84	43	31	127	0	0	0	0	49	1817	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	127	0	0	158	0	0	0	0	0	1964	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					48.0	48.0	
Total Split (s)	0.0	32.0	0.0	32.0	32.0	0.0	0.0	0.0	0.0	48.0	48.0	0.0
Total Split (%)	0.0%	40.0%	0.0%	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	60.0%	60.0%	0.0%
Maximum Green (s)		27.3		27.3	27.3					43.3	43.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		28.3			28.3						44.3	
Actuated g/C Ratio		0.35			0.35						0.55	
v/c Ratio		0.20			0.26						0.70	
Control Delay		17.3			19.8						2.7	
Queue Delay		0.0			0.0						0.1	
Total Delay		17.3			19.8						2.8	
LOS		B			B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.3			19.8						2.8	
Approach LOS		B			B						A	
Stops (vph)		69			97						306	
Fuel Used(gal)		1			2						7	
CO Emissions (g/hr)		87			105						473	
NOx Emissions (g/hr)		17			20						92	
VOC Emissions (g/hr)		20			24						110	
Dilemma Vehicles (#)		0			0						0	
Queue Length 50th (ft)		39			55						11	
Queue Length 95th (ft)		77			100						12	
Internal Link Dist (ft)		440			279			682			217	
Turn Bay Length (ft)												
Base Capacity (vph)		636			616						2801	
Starvation Cap Reductn		0			0						70	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.20			0.26						0.72	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 53 (66%), Referenced to phase 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 4.8 Intersection LOS: A
Intersection Capacity Utilization 55.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 120: Clinton & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	127	158	1964
v/c Ratio	0.20	0.26	0.70
Control Delay	17.3	19.8	2.7
Queue Delay	0.0	0.0	0.1
Total Delay	17.3	19.8	2.8
Queue Length 50th (ft)	39	55	11
Queue Length 95th (ft)	77	100	12
Internal Link Dist (ft)	440	279	217
Turn Bay Length (ft)			
Base Capacity (vph)	636	616	2801
Starvation Cap Reductn	0	0	70
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.20	0.26	0.72

Intersection Summary

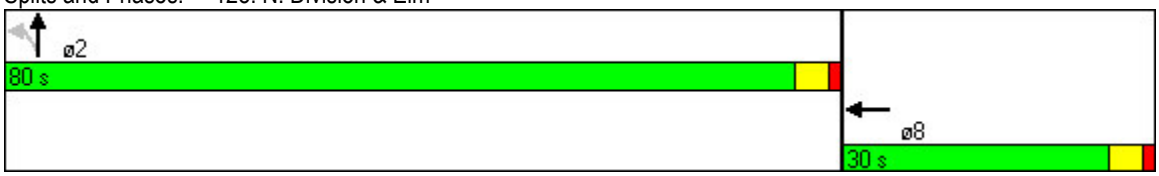
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	105	48	443	2129	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.953							
Flt Protected								0.991				
Satd. Flow (prot)	0	0	0	0	3373	0	0	5040	0	0	0	0
Flt Permitted								0.991				
Satd. Flow (perm)	0	0	0	0	3373	0	0	5040	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					10			95				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		349			195			317			734	
Travel Time (s)		7.9			4.4			7.2			16.7	
Peak Hour Factor	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)	0	0	0	0	117	53	492	2366	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	170	0	0	2858	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					20.6		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	80.0	80.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	27.3%	0.0%	72.7%	72.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		75.4	75.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					26.4			76.4				
Actuated g/C Ratio					0.24			0.69				
v/c Ratio					0.21			0.81				
Control Delay					32.2			4.9				
Queue Delay					0.0			0.5				
Total Delay					32.2			5.4				
LOS					C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					32.2			5.4				
Approach LOS					C			A				
Stops (vph)					113			766				
Fuel Used(gal)					2			13				
CO Emissions (g/hr)					130			919				
NOx Emissions (g/hr)					25			179				
VOC Emissions (g/hr)					30			213				
Dilemma Vehicles (#)					0			0				
Queue Length 50th (ft)					47			89				
Queue Length 95th (ft)					77			98				
Internal Link Dist (ft)		269			115			237			654	
Turn Bay Length (ft)												
Base Capacity (vph)					817			3530				
Starvation Cap Reductn					0			274				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.21			0.88				

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 10 (9%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 75
Control Type: Pretimed
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 6.9 Intersection LOS: A
Intersection Capacity Utilization 61.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 128: N. Division & Elm



Lane Group	WBT	NBT
Lane Group Flow (vph)	170	2858
v/c Ratio	0.21	0.81
Control Delay	32.2	4.9
Queue Delay	0.0	0.5
Total Delay	32.2	5.4
Queue Length 50th (ft)	47	89
Queue Length 95th (ft)	77	98
Internal Link Dist (ft)	115	237
Turn Bay Length (ft)		
Base Capacity (vph)	817	3530
Starvation Cap Reductn	0	274
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.21	0.88

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	19	408	0	0	0	0	0	1144	353
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.965	
Flt Protected					0.998							
Satd. Flow (prot)	0	0	0	0	5075	0	0	0	0	0	4907	0
Flt Permitted					0.998							
Satd. Flow (perm)	0	0	0	0	5075	0	0	0	0	0	4907	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					10						151	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			349			277			762	
Travel Time (s)		8.2			7.9			6.3			17.3	
Peak Hour Factor	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)	0	0	0	21	453	0	0	0	0	0	1271	392
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	474	0	0	0	0	0	1663	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.7	20.7						47.0	
Total Split (s)	0.0	0.0	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	47.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	41.3%	41.3%	0.0%	0.0%	0.0%	0.0%	0.0%	58.8%	0.0%
Maximum Green (s)				28.3	28.3						42.3	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.5	1.5						1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					29.3						43.3	
Actuated g/C Ratio					0.37						0.54	
v/c Ratio					0.25						0.61	
Control Delay					17.8						2.0	
Queue Delay					0.0						0.0	
Total Delay					17.8						2.0	
LOS					B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					17.8						2.0	
Approach LOS					B						A	
Stops (vph)					277						62	
Fuel Used(gal)					4						10	
CO Emissions (g/hr)					296						689	
NOx Emissions (g/hr)					58						134	
VOC Emissions (g/hr)					69						160	
Dilemma Vehicles (#)					0						0	
Queue Length 50th (ft)					58						0	
Queue Length 95th (ft)					82						10	
Internal Link Dist (ft)		279			269			197			682	
Turn Bay Length (ft)												
Base Capacity (vph)					1865						2725	
Starvation Cap Reductn					0						0	
Spillback Cap Reductn					0						0	
Storage Cap Reductn					0						0	
Reduced v/c Ratio					0.25						0.61	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 68 (85%), Referenced to phase 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 5.5 Intersection LOS: A
Intersection Capacity Utilization 44.9% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 129: N. Division & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	474	1663
v/c Ratio	0.25	0.61
Control Delay	17.8	2.0
Queue Delay	0.0	0.0
Total Delay	17.8	2.0
Queue Length 50th (ft)	58	0
Queue Length 95th (ft)	82	10
Internal Link Dist (ft)	269	682
Turn Bay Length (ft)		
Base Capacity (vph)	1865	2725
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.25	0.61

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	184	0	0	0	0	0	2683	38	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.998				
Flt Protected	0.950	0.988										
Satd. Flow (prot)	1610	3350	0	0	0	0	0	5075	0	0	0	0
Flt Permitted	0.950	0.988										
Satd. Flow (perm)	1610	3350	0	0	0	0	0	5075	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	5	5						5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			206			316			317	
Travel Time (s)		7.8			4.7			7.2			7.2	
Peak Hour Factor	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)	193	204	0	0	0	0	0	2981	42	0	0	0
Shared Lane Traffic (%)	33%											
Lane Group Flow (vph)	129	268	0	0	0	0	0	3023	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	21.0	21.0						50.0				
Total Split (s)	23.0	23.0	0.0	0.0	0.0	0.0	0.0	87.0	0.0	0.0	0.0	0.0
Total Split (%)	20.9%	20.9%	0.0%	0.0%	0.0%	0.0%	0.0%	79.1%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	18.4	18.4						82.4				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	1.4	1.4						1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	19.4	19.4						83.4				
Actuated g/C Ratio	0.18	0.18						0.76				
v/c Ratio	0.45	0.45						0.79				
Control Delay	44.6	42.5						1.0				
Queue Delay	0.0	0.0						2.9				
Total Delay	44.6	42.5						4.0				
LOS	D	D						A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		43.2						4.0				
Approach LOS		D						A				
Stops (vph)	98	207						118				
Fuel Used(gal)	2	4						8				
CO Emissions (g/hr)	133	271						553				
NOx Emissions (g/hr)	26	53						108				
VOC Emissions (g/hr)	31	63						128				
Dilemma Vehicles (#)	0	0						0				
Queue Length 50th (ft)	86	92						26				
Queue Length 95th (ft)	153	136						m25				
Internal Link Dist (ft)		265			126			236			237	
Turn Bay Length (ft)												
Base Capacity (vph)	288	595						3849				
Starvation Cap Reductn	0	0						700				
Spillback Cap Reductn	0	0						65				
Storage Cap Reductn	0	0						0				
Reduced v/c Ratio	0.45	0.45						0.96				

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 6 (5%), Referenced to phase 2:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 84.4%	ICU Level of Service E
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 135: S Division & Elm

Lane Group	EBL	EBT	NBT
Lane Group Flow (vph)	129	268	3023
v/c Ratio	0.45	0.45	0.79
Control Delay	44.6	42.5	1.0
Queue Delay	0.0	0.0	2.9
Total Delay	44.6	42.5	4.0
Queue Length 50th (ft)	86	92	26
Queue Length 95th (ft)	153	136	m25
Internal Link Dist (ft)		265	236
Turn Bay Length (ft)			
Base Capacity (vph)	288	595	3849
Starvation Cap Reductn	0	0	700
Spillback Cap Reductn	0	0	65
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.45	0.45	0.96

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	203	71	0	0	0	0	0	0	155	1030	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									
Flt Protected											0.994	
Satd. Flow (prot)	0	5085	1583	0	0	0	0	0	0	0	6369	0
Flt Permitted											0.994	
Satd. Flow (perm)	0	5085	1583	0	0	0	0	0	0	0	6369	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			64								74	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		208			345			332			277	
Travel Time (s)		4.7			7.8			7.5			6.3	
Peak Hour Factor	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)	0	226	79	0	0	0	0	0	0	172	1144	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	226	79	0	0	0	0	0	0	0	1316	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		20.8	20.8							47.0	47.0	
Total Split (s)	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	47.0	47.0	0.0
Total Split (%)	0.0%	41.3%	41.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%
Maximum Green (s)		28.2	28.2							42.2	42.2	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.6	1.6							1.6	1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.0	3.8	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		29.2	29.2								43.2	
Actuated g/C Ratio		0.36	0.36								0.54	
v/c Ratio		0.12	0.13								0.38	
Control Delay		17.1	6.9								1.6	
Queue Delay		0.0	0.0								0.1	
Total Delay		17.1	6.9								1.7	
LOS		B	A								A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		14.5									1.7	
Approach LOS		B									A	
Stops (vph)		128	18								61	
Fuel Used(gal)		2	0								3	
CO Emissions (g/hr)		122	22								229	
NOx Emissions (g/hr)		24	4								45	
VOC Emissions (g/hr)		28	5								53	
Dilemma Vehicles (#)		0	0								0	
Queue Length 50th (ft)		27	5								10	
Queue Length 95th (ft)		43	31								11	
Internal Link Dist (ft)		128			265			252			197	
Turn Bay Length (ft)												
Base Capacity (vph)		1856	618								3473	
Starvation Cap Reductn		0	0								878	
Spillback Cap Reductn		0	0								0	
Storage Cap Reductn		0	0								0	
Reduced v/c Ratio		0.12	0.13								0.51	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 73 (91%), Referenced to phase 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.38
Intersection Signal Delay: 4.1 Intersection LOS: A
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 136: S Division & Oak

Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	226	79	1316
v/c Ratio	0.12	0.13	0.38
Control Delay	17.1	6.9	1.6
Queue Delay	0.0	0.0	0.1
Total Delay	17.1	6.9	1.7
Queue Length 50th (ft)	27	5	10
Queue Length 95th (ft)	43	31	11
Internal Link Dist (ft)	128		197
Turn Bay Length (ft)			
Base Capacity (vph)	1856	618	3473
Starvation Cap Reductn	0	0	878
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.12	0.13	0.51

Intersection Summary

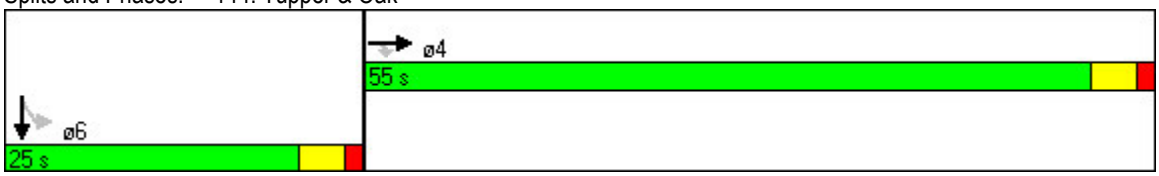
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	396	142	0	0	0	0	0	0	29	101	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									
Flt Protected											0.989	
Satd. Flow (prot)	0	3539	1583	0	0	0	0	0	0	0	3500	0
Flt Permitted											0.989	
Satd. Flow (perm)	0	3539	1583	0	0	0	0	0	0	0	3500	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			158								32	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		351			380			611			685	
Travel Time (s)		8.0			8.6			13.9			15.6	
Peak Hour Factor	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)	0	440	158	0	0	0	0	0	0	32	112	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	440	158	0	0	0	0	0	0	0	144	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		45.0	45.0							20.6	20.6	
Total Split (s)	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0
Total Split (%)	0.0%	68.8%	68.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%	31.3%	0.0%
Maximum Green (s)		50.4	50.4							20.4	20.4	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.4	1.4							1.4	1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		51.4	51.4								21.4	
Actuated g/C Ratio		0.64	0.64								0.27	
v/c Ratio		0.19	0.15								0.15	
Control Delay		2.0	0.7								17.8	
Queue Delay		0.0	0.0								0.0	
Total Delay		2.0	0.7								17.8	
LOS		A	A								B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		1.7									17.8	
Approach LOS		A									B	
Stops (vph)		99	13								74	
Fuel Used(gal)		2	0								2	
CO Emissions (g/hr)		125	34								110	
NOx Emissions (g/hr)		24	7								21	
VOC Emissions (g/hr)		29	8								26	
Dilemma Vehicles (#)		0	0								0	
Queue Length 50th (ft)		5	0								22	
Queue Length 95th (ft)		7	0								44	
Internal Link Dist (ft)		271			300			531			605	
Turn Bay Length (ft)												
Base Capacity (vph)		2274	1074								960	
Starvation Cap Reductn		0	0								0	
Spillback Cap Reductn		0	0								0	
Storage Cap Reductn		0	0								0	
Reduced v/c Ratio		0.19	0.15								0.15	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 52 (65%), Referenced to phase 4:EBT, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.19
Intersection Signal Delay: 4.8 — Intersection LOS: A
Intersection Capacity Utilization 32.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 144: Tupper & Oak



Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	440	158	144
v/c Ratio	0.19	0.15	0.15
Control Delay	2.0	0.7	17.8
Queue Delay	0.0	0.0	0.0
Total Delay	2.0	0.7	17.8
Queue Length 50th (ft)	5	0	22
Queue Length 95th (ft)	7	0	44
Internal Link Dist (ft)	271		605
Turn Bay Length (ft)			
Base Capacity (vph)	2274	1074	960
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.19	0.15	0.15

Intersection Summary

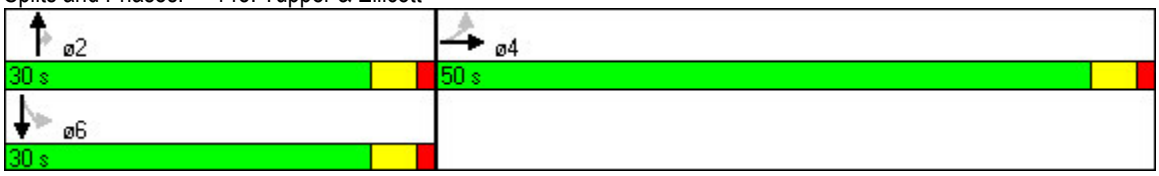
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	582	42	0	0	0	0	175	51	5	35	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor		1.00										
Frt		0.986						0.994	0.850			
Flt Protected		0.994									0.995	
Satd. Flow (prot)	0	4977	0	0	0	0	0	1743	1504	0	2469	0
Flt Permitted		0.994									0.934	
Satd. Flow (perm)	0	4975	0	0	0	0	0	1743	1504	0	2318	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		38						3	68			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	114	693	84	0	0	0	0	199	76	7	70	0
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	0	891	0	0	0	0	0	207	68	0	77	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	50.0	50.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	37.5%	37.5%	37.5%	0.0%
Maximum Green (s)	45.4	45.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		47.4						27.4	27.4		27.4	
Actuated g/C Ratio		0.59						0.34	0.34		0.34	
v/c Ratio		0.30						0.35	0.12		0.10	
Control Delay		7.2						21.4	5.7		13.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0						0.0	0.0		0.0	
Total Delay		7.2						21.4	5.7		13.5	
LOS		A						C	A		B	
Approach Delay		7.2						17.5			13.5	
Approach LOS		A						B			B	
Stops (vph)		297						128	9		30	
Fuel Used(gal)		4						2	0		1	
CO Emissions (g/hr)		311						139	16		35	
NOx Emissions (g/hr)		61						27	3		7	
VOC Emissions (g/hr)		72						32	4		8	
Dilemma Vehicles (#)		0						0	0		0	
Queue Length 50th (ft)		47						78	0		15	
Queue Length 95th (ft)		60						133	13		17	
Internal Link Dist (ft)		262			271			271			652	
Turn Bay Length (ft)												
Base Capacity (vph)		2963						599	560		794	
Starvation Cap Reductn		0						0	0		0	
Spillback Cap Reductn		0						0	0		0	
Storage Cap Reductn		0						0	0		0	
Reduced v/c Ratio		0.30						0.35	0.12		0.10	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 41 (51%), Referenced to phase 4:EBTL, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 0.35
Intersection Signal Delay: 9.9 — Intersection LOS: A
Intersection Capacity Utilization 30.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 145: Tupper & Ellicott



Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	891	207	68	77
v/c Ratio	0.30	0.35	0.12	0.10
Control Delay	7.2	21.4	5.7	13.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.2	21.4	5.7	13.5
Queue Length 50th (ft)	47	78	0	15
Queue Length 95th (ft)	60	133	13	17
Internal Link Dist (ft)	262	271		652
Turn Bay Length (ft)				
Base Capacity (vph)	2963	599	560	794
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.30	0.35	0.12	0.10

Intersection Summary

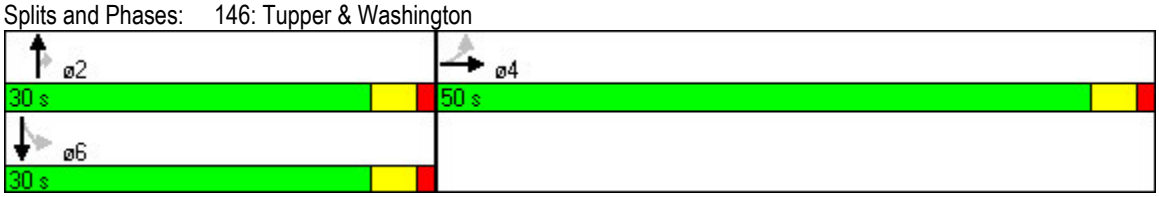
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	397	100	0	0	0	0	87	48	83	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964							0.850			
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	4955	0	0	0	0	0	1900	1615	1787	1863	0
Flt Permitted		0.998								0.667		
Satd. Flow (perm)	0	4955	0	0	0	0	0	1900	1615	1255	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		149							51			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			342			356			718	
Travel Time (s)		6.5			7.8			8.1			16.3	
Peak Hour Factor	0.50	0.90	0.67	0.90	0.90	0.90	0.90	0.80	0.94	0.76	0.73	0.90
Heavy Vehicles (%)	0%	1%	0%	2%	2%	2%	2%	0%	0%	1%	2%	2%
Adj. Flow (vph)	24	441	149	0	0	0	0	109	51	109	274	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	614	0	0	0	0	0	109	51	109	274	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	50.0	50.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	37.5%	37.5%	37.5%	0.0%
Maximum Green (s)	45.4	45.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	3.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		47.4						27.4	26.4	27.4	27.4	
Actuated g/C Ratio		0.59						0.34	0.33	0.34	0.34	
v/c Ratio		0.20						0.17	0.09	0.25	0.43	
Control Delay		0.3						19.3	6.3	26.8	29.1	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		0.3						19.3	6.3	26.8	29.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A						B	A	C	C	
Approach Delay		0.3						15.1			28.5	
Approach LOS		A						B			C	
Stops (vph)		22						58	10	66	169	
Fuel Used(gal)		1						1	0	1	3	
CO Emissions (g/hr)		90						63	18	90	226	
NOx Emissions (g/hr)		18						12	3	17	44	
VOC Emissions (g/hr)		21						15	4	21	52	
Dilemma Vehicles (#)		0						0	0	0	0	
Queue Length 50th (ft)		0						37	0	46	122	
Queue Length 95th (ft)		0						64	23	73	149	
Internal Link Dist (ft)		208			262			276			638	
Turn Bay Length (ft)												
Base Capacity (vph)		2997						651	567	430	638	
Starvation Cap Reductn		0						0	0	0	0	
Spillback Cap Reductn		0						0	0	0	0	
Storage Cap Reductn		0						0	0	0	0	
Reduced v/c Ratio		0.20						0.17	0.09	0.25	0.43	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 34 (43%), Referenced to phase 4:EBTL, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 11.7 — Intersection LOS: B
Intersection Capacity Utilization 28.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 146: Tupper & Washington



Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	614	109	51	109	274
v/c Ratio	0.20	0.17	0.09	0.25	0.43
Control Delay	0.3	19.3	6.3	26.8	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.3	19.3	6.3	26.8	29.1
Queue Length 50th (ft)	0	37	0	46	122
Queue Length 95th (ft)	0	64	23	73	149
Internal Link Dist (ft)	208	276			638
Turn Bay Length (ft)					
Base Capacity (vph)	2997	651	567	430	638
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.20	0.17	0.09	0.25	0.43

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	412	0	0	0	0	0	529	2	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.999				
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3536	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3536	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		380			319			560			585	
Travel Time (s)		8.6			7.3			12.7			13.3	
Peak Hour Factor	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)	0	458	0	0	0	0	0	588	2	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	458	0	0	0	0	0	590	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type												
Protected Phases		4						2				
Permitted Phases												
Minimum Split (s)		45.0						21.2				
Total Split (s)	0.0	55.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	68.8%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)		49.8						19.8				
Yellow Time (s)		3.2						3.2				
All-Red Time (s)		2.0						2.0				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.2	3.0	3.0	3.0	3.0	3.0	4.2	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0						5.0				
Flash Dont Walk (s)		11.0						11.0				
Pedestrian Calls (#/hr)		0						0				
Act Effct Green (s)		50.8						20.8				
Actuated g/C Ratio		0.64						0.26				
v/c Ratio		0.20						0.64				
Control Delay		2.1						30.1				
Queue Delay		0.0						0.0				
Total Delay		2.1						30.1				
LOS		A						C				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.1						30.1				
Approach LOS		A						C				
Stops (vph)		40						456				
Fuel Used(gal)		2						8				
CO Emissions (g/hr)		113						566				
NOx Emissions (g/hr)		22						110				
VOC Emissions (g/hr)		26						131				
Dilemma Vehicles (#)		0						0				
Queue Length 50th (ft)		11						137				
Queue Length 95th (ft)		20						192				
Internal Link Dist (ft)		300			239			480			505	
Turn Bay Length (ft)												
Base Capacity (vph)		2247						919				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.20						0.64				

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 52 (65%), Referenced to phase 4:EBT, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 17.9 Intersection LOS: B
Intersection Capacity Utilization 48.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 152: Tupper & Elm St

Lane Group	EBT	NBT
Lane Group Flow (vph)	458	590
v/c Ratio	0.20	0.64
Control Delay	2.1	30.1
Queue Delay	0.0	0.0
Total Delay	2.1	30.1
Queue Length 50th (ft)	11	137
Queue Length 95th (ft)	20	192
Internal Link Dist (ft)	300	480
Turn Bay Length (ft)		
Base Capacity (vph)	2247	919
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.20	0.64

Intersection Summary

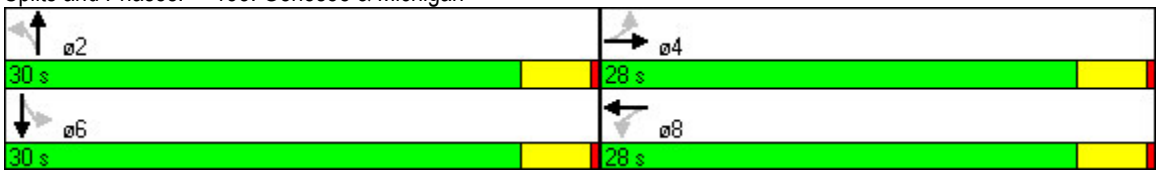
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	88	20	27	133	63	12	348	11	45	272	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.988			0.962			0.996			0.989	
Flt Protected		0.973			0.994			0.998			0.993	
Satd. Flow (prot)	0	3402	0	0	1781	0	0	3518	0	0	3476	0
Flt Permitted		0.711			0.947			0.942			0.871	
Satd. Flow (perm)	0	2486	0	0	1697	0	0	3321	0	0	3049	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			43			7			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			1157			878			441	
Travel Time (s)		11.8			26.3			20.0			10.0	
Peak Hour Factor	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)	156	98	22	30	148	70	13	387	12	50	302	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	276	0	0	248	0	0	412	0	0	379	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	48.3%	48.3%	0.0%	48.3%	48.3%	0.0%	51.7%	51.7%	0.0%	51.7%	51.7%	0.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		25.0			25.0			27.0			27.0	
Actuated g/C Ratio		0.43			0.43			0.47			0.47	
v/c Ratio		0.25			0.33			0.27			0.27	
Control Delay		10.5			10.4			9.9			9.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.5			10.4			9.9			9.6	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.5			10.4			9.9			9.6	
Approach LOS		B			B			A			A	
Stops (vph)		137			115			205			183	
Fuel Used(gal)		2			3			4			3	
CO Emissions (g/hr)		160			218			309			199	
NOx Emissions (g/hr)		31			42			60			39	
VOC Emissions (g/hr)		37			51			72			46	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		28			44			42			37	
Queue Length 95th (ft)		50			88			67			61	
Internal Link Dist (ft)		438			1077			798			361	
Turn Bay Length (ft)												
Base Capacity (vph)		1083			756			1550			1429	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.25			0.33			0.27			0.27	

Intersection Summary

Area Type: Other
Cycle Length: 58
Actuated Cycle Length: 58
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Pretimed
Maximum v/c Ratio: 0.33
Intersection Signal Delay: 10.0 Intersection LOS: B
Intersection Capacity Utilization 53.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 155: Genesee & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	276	248	412	379
v/c Ratio	0.25	0.33	0.27	0.27
Control Delay	10.5	10.4	9.9	9.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.5	10.4	9.9	9.6
Queue Length 50th (ft)	28	44	42	37
Queue Length 95th (ft)	50	88	67	61
Internal Link Dist (ft)	438	1077	798	361
Turn Bay Length (ft)				
Base Capacity (vph)	1083	756	1550	1429
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.33	0.27	0.27

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	625	611	199	73	17	274	327	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	0.850
Flt Protected		0.974				0.986		
Satd. Flow (prot)	0	4951	1538	0	0	1736	2760	1509
Flt Permitted		0.974				0.986		
Satd. Flow (perm)	0	4951	1538	0	0	1736	2760	1509
Right Turn on Red								Yes
Satd. Flow (RTOR)								98
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	772	702	216	103	27	334	363	98
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	1474	216	0	0	464	363	98
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	custom
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	6
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	25.0
Total Split (s)	55.0	55.0	55.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	68.8%	68.8%	68.8%	31.3%	31.3%	31.3%	31.3%	31.3%
Maximum Green (s)	50.4	50.4	50.4	20.4	20.4	20.4	20.4	20.4
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	4.1
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
Act Effct Green (s)		50.4	50.4			20.9	20.9	20.9
Actuated g/C Ratio		0.63	0.63			0.26	0.26	0.26
v/c Ratio		0.47	0.22			1.02	0.50	0.21
Control Delay		5.7	5.3			83.3	28.0	6.6
Queue Delay		0.1	0.4			0.0	0.0	0.0
Total Delay		5.9	5.7			83.3	28.0	6.6

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		A	A			F	C	A
Approach Delay		5.8				83.3		
Approach LOS		A				F		
Stops (vph)		336	51			311	270	12
Fuel Used(gal)		6	1			10	5	1
CO Emissions (g/hr)		423	66			691	365	37
NOx Emissions (g/hr)		82	13			135	71	7
VOC Emissions (g/hr)		98	15			160	84	8
Dilemma Vehicles (#)		0	0			0	0	0
Queue Length 50th (ft)		75	28			~253	87	0
Queue Length 95th (ft)		88	46			#375	132	15
Internal Link Dist (ft)		206				625		
Turn Bay Length (ft)								
Base Capacity (vph)		3119	969			454	721	467
Starvation Cap Reductn		565	380			0	0	0
Spillback Cap Reductn		0	0			0	0	0
Storage Cap Reductn		0	0			0	0	0
Reduced v/c Ratio		0.58	0.37			1.02	0.50	0.21

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 45 (56%), Referenced to phase 8:WBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 22.7 Intersection LOS: C
Intersection Capacity Utilization 76.1% ICU Level of Service D
Analysis Period (min) 15

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

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

Splits and Phases: 159: Pearl & Main

Lane Group	WBT	WBR	NBT	SBR	SBR2
Lane Group Flow (vph)	1474	216	464	363	98
v/c Ratio	0.47	0.22	1.02	0.50	0.21
Control Delay	5.7	5.3	83.3	28.0	6.6
Queue Delay	0.1	0.4	0.0	0.0	0.0
Total Delay	5.9	5.7	83.3	28.0	6.6
Queue Length 50th (ft)	75	28	~253	87	0
Queue Length 95th (ft)	88	46	#375	132	15
Internal Link Dist (ft)	206		625		
Turn Bay Length (ft)					
Base Capacity (vph)	3119	969	454	721	467
Starvation Cap Reductn	565	380	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.58	0.37	1.02	0.50	0.21

Intersection Summary

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

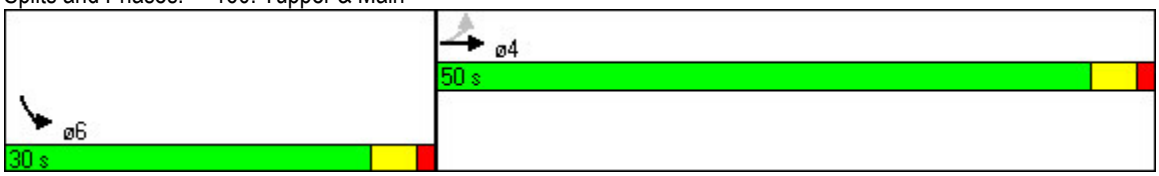
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	71	520	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.994				
Satd. Flow (prot)	0	5055	0	0	1863	0
Flt Permitted		0.994				
Satd. Flow (perm)	0	5055	0	0	1863	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		161	288		705	
Travel Time (s)		3.7	6.5		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	79	578	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	657	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm					
Protected Phases		4			6	
Permitted Phases	4					
Minimum Split (s)	40.0	40.0			20.6	
Total Split (s)	50.0	50.0	0.0	0.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	37.5%	0.0%
Maximum Green (s)	45.4	45.4			25.4	
Yellow Time (s)	3.2	3.2			3.2	
All-Red Time (s)	1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.6	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0	
Act Effct Green (s)		46.4				
Actuated g/C Ratio		0.58				
v/c Ratio		0.22				
Control Delay		8.4				
Queue Delay		0.0				
Total Delay		8.4				
LOS		A				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		8.4				
Approach LOS		A				
Stops (vph)		263				
Fuel Used(gal)		3				
CO Emissions (g/hr)		224				
NOx Emissions (g/hr)		44				
VOC Emissions (g/hr)		52				
Dilemma Vehicles (#)		0				
Queue Length 50th (ft)		53				
Queue Length 95th (ft)		71				
Internal Link Dist (ft)		81	208		625	
Turn Bay Length (ft)						
Base Capacity (vph)		2932				
Starvation Cap Reductn		0				
Spillback Cap Reductn		0				
Storage Cap Reductn		0				
Reduced v/c Ratio		0.22				

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 27 (34%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.22	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 14.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 160: Tupper & Main



Lane Group	EBT
Lane Group Flow (vph)	657
v/c Ratio	0.22
Control Delay	8.4
Queue Delay	0.0
Total Delay	8.4
Queue Length 50th (ft)	53
Queue Length 95th (ft)	71
Internal Link Dist (ft)	81
Turn Bay Length (ft)	
Base Capacity (vph)	2932
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.22

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	152	2023	396	86	466	0	0	285	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.977						0.972	
Flt Protected					0.997		0.950					
Satd. Flow (prot)	0	0	0	0	6242	0	1770	1863	0	0	3440	0
Flt Permitted					0.997		0.292					
Satd. Flow (perm)	0	0	0	0	6242	0	544	1863	0	0	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					86						30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	169	2248	440	96	518	0	0	317	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2857	0	96	518	0	0	391	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	15.0	50.0	0.0	0.0	20.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%	17.6%	58.8%	0.0%	0.0%	23.5%	0.0%
Maximum Green (s)				46.0	46.0		11.0				16.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	35.0
Total Split (%)	41%
Maximum Green (s)	31.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					47.0		32.0	32.0			17.0	
Actuated g/C Ratio					0.55		0.38	0.38			0.20	
v/c Ratio					0.82		0.25	0.74			0.55	
Control Delay					17.5		19.4	30.6			31.5	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					17.5		19.4	30.6			31.5	
LOS					B		B	C			C	
Approach Delay					17.5			28.8			31.5	
Approach LOS					B			C			C	
90th %ile Green (s)				46.0	46.0		11.0				16.0	
90th %ile Term Code				MaxR	MaxR		Max				MaxR	
70th %ile Green (s)				46.0	46.0		11.0				16.0	
70th %ile Term Code				MaxR	MaxR		Max				MaxR	
50th %ile Green (s)				46.0	46.0		11.0				16.0	
50th %ile Term Code				MaxR	MaxR		Max				MaxR	
30th %ile Green (s)				46.0	46.0		11.0				16.0	
30th %ile Term Code				MaxR	MaxR		Max				MaxR	
10th %ile Green (s)				46.0	46.0		11.0				16.0	
10th %ile Term Code				MaxR	MaxR		Max				MaxR	
Stops (vph)					1931		55	393			284	
Fuel Used(gal)					32		1	7			6	
CO Emissions (g/hr)					2243		75	516			444	
NOx Emissions (g/hr)					436		15	100			86	
VOC Emissions (g/hr)					520		17	120			103	
Dilemma Vehicles (#)					0		0	0			0	
Queue Length 50th (ft)					328		33	234			91	
Queue Length 95th (ft)					381		66	354			137	
Internal Link Dist (ft)		302			308			262			842	
Turn Bay Length (ft)												
Base Capacity (vph)					3490		378	701			712	
Starvation Cap Reductn					0		0	0			0	
Spillback Cap Reductn					0		0	0			0	
Storage Cap Reductn					0		0	0			0	
Reduced v/c Ratio					0.82		0.25	0.74			0.55	

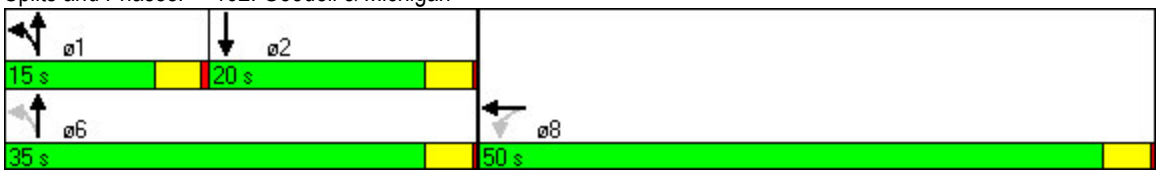
Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Natural Cycle: 70	

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	31.0
90th %ile Term Code	Max
70th %ile Green (s)	31.0
70th %ile Term Code	Max
50th %ile Green (s)	31.0
50th %ile Term Code	Hold
30th %ile Green (s)	31.0
30th %ile Term Code	Hold
10th %ile Green (s)	31.0
10th %ile Term Code	Hold
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 69.4%	ICU Level of Service C
Analysis Period (min) 15	
90th %ile Actuated Cycle: 85	
70th %ile Actuated Cycle: 85	
50th %ile Actuated Cycle: 85	
30th %ile Actuated Cycle: 85	
10th %ile Actuated Cycle: 85	

Splits and Phases: 162: Goodell & Michigan



Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	2857	96	518	391
v/c Ratio	0.82	0.25	0.74	0.55
Control Delay	17.5	19.4	30.6	31.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	17.5	19.4	30.6	31.5
Queue Length 50th (ft)	328	33	234	91
Queue Length 95th (ft)	381	66	354	137
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	3490	378	701	712
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.82	0.25	0.74	0.55

Intersection Summary

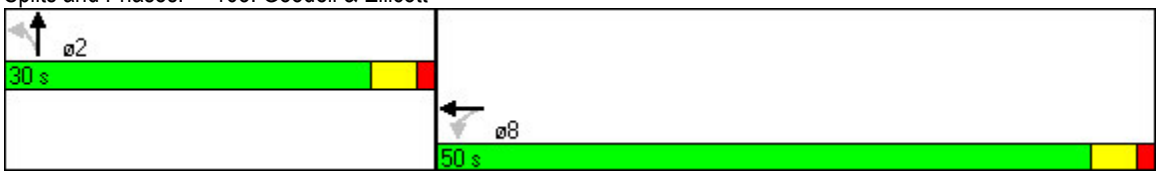
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	65	1644	316	46	147	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt					0.977							
Flt Protected					0.997			0.987				
Satd. Flow (prot)	0	0	0	0	6300	0	0	1856	0	0	0	0
Flt Permitted					0.997			0.987				
Satd. Flow (perm)	0	0	0	0	6300	0	0	1856	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					102							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		326			375			732			791	
Travel Time (s)		7.4			8.5			16.6			18.0	
Confl. Peds. (#/hr)						3						
Peak Hour Factor	0.90	0.90	0.90	0.50	0.85	0.83	0.78	0.88	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	1%	0%	4%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	130	1934	381	59	167	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2445	0	0	226	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					
Protected Phases					8			2				
Permitted Phases				8			2					
Minimum Split (s)				40.0	40.0		25.0	25.0				
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	62.5%	62.5%	0.0%	37.5%	37.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)				45.4	45.4		25.4	25.4				
Yellow Time (s)				3.2	3.2		3.2	3.2				
All-Red Time (s)				1.4	1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0				
Flash Dont Walk (s)				11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)				0	0		0	0				
Act Effct Green (s)					47.4			27.4				
Actuated g/C Ratio					0.59			0.34				
v/c Ratio					0.65			0.36				
Control Delay					11.3			15.8				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					1.3			0.0				
Total Delay					12.6			15.8				
LOS					B			B				
Approach Delay					12.6			15.8				
Approach LOS					B			B				
Stops (vph)					1190			83				
Fuel Used(gal)					17			2				
CO Emissions (g/hr)					1198			153				
NOx Emissions (g/hr)					233			30				
VOC Emissions (g/hr)					278			35				
Dilemma Vehicles (#)					0			0				
Queue Length 50th (ft)					204			52				
Queue Length 95th (ft)					217			81				
Internal Link Dist (ft)		246			295			652			711	
Turn Bay Length (ft)												
Base Capacity (vph)					3774			636				
Starvation Cap Reductn					1035			0				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.89			0.36				

Intersection Summary

Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 46 (58%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 47.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 163: Goodell & Ellicott



Lane Group	WBT	NBT
Lane Group Flow (vph)	2445	226
v/c Ratio	0.65	0.36
Control Delay	11.3	15.8
Queue Delay	1.3	0.0
Total Delay	12.6	15.8
Queue Length 50th (ft)	204	52
Queue Length 95th (ft)	217	81
Internal Link Dist (ft)	295	652
Turn Bay Length (ft)		
Base Capacity (vph)	3774	636
Starvation Cap Reductn	1035	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.89	0.36

Intersection Summary

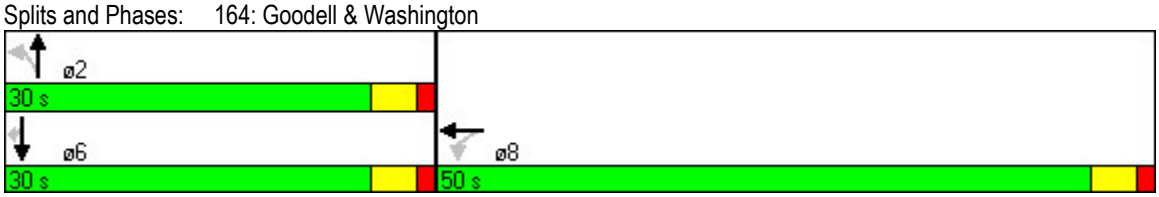
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	81	943	41	58	130	0	0	122	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.994							0.850
Flt Protected					0.996			0.983				
Satd. Flow (prot)	0	0	0	0	6335	0	0	1771	0	0	1792	1429
Flt Permitted					0.996			0.860				
Satd. Flow (perm)	0	0	0	0	6335	0	0	1549	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					17							46
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	90	1060	46	77	144	0	0	140	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1196	0	0	221	0	0	140	46
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	30.0	30.0	0.0	0.0	30.0	30.0
Total Split (%)	0.0%	0.0%	0.0%	62.5%	62.5%	0.0%	37.5%	37.5%	0.0%	0.0%	37.5%	37.5%
Maximum Green (s)				45.4	45.4		25.4	25.4			25.4	25.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					47.4			27.4			27.4	27.4
Actuated g/C Ratio					0.59			0.34			0.34	0.34
v/c Ratio					0.32			0.42			0.23	0.09
Control Delay					1.1			17.4			20.0	6.4
Queue Delay					0.1			0.0			0.0	0.0
Total Delay					1.2			17.4			20.0	6.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			B			C	A
Approach Delay					1.2			17.4			16.7	
Approach LOS					A			B			B	
Stops (vph)					48			144			85	6
Fuel Used(gal)					3			3			2	0
CO Emissions (g/hr)					224			175			155	23
NOx Emissions (g/hr)					44			34			30	5
VOC Emissions (g/hr)					52			41			36	5
Dilemma Vehicles (#)					0			0			0	0
Queue Length 50th (ft)					8			90			49	0
Queue Length 95th (ft)					9			154			88	8
Internal Link Dist (ft)		206			246			638			1228	
Turn Bay Length (ft)												
Base Capacity (vph)					3760			531			614	520
Starvation Cap Reductn					1103			0			0	0
Spillback Cap Reductn					0			0			0	0
Storage Cap Reductn					0			0			0	0
Reduced v/c Ratio					0.45			0.42			0.23	0.09

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 53 (66%), Referenced to phase 8:WBTL, Start of Green
Natural Cycle: 65
Control Type: Pretimed
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 5.2 — Intersection LOS: A
Intersection Capacity Utilization 42.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 164: Goodell & Washington



Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	1196	221	140	46
v/c Ratio	0.32	0.42	0.23	0.09
Control Delay	1.1	17.4	20.0	6.4
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	1.2	17.4	20.0	6.4
Queue Length 50th (ft)	8	90	49	0
Queue Length 95th (ft)	9	154	88	8
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3760	531	614	520
Starvation Cap Reductn	1103	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.42	0.23	0.09

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	84	43	47	241	0	0	0	0	66	1741	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.949										0.850
Flt Protected					0.992						0.998	
Satd. Flow (prot)	0	3359	0	0	3511	0	0	0	0	0	5075	1583
Flt Permitted					0.882						0.998	
Satd. Flow (perm)	0	3359	0	0	3122	0	0	0	0	0	5075	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21										253
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			465			349			422	
Travel Time (s)		3.8			10.6			7.9			9.6	
Peak Hour Factor	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)	0	93	48	52	268	0	0	0	0	73	1934	370
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	141	0	0	320	0	0	0	0	0	2007	370
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Minimum Split (s)		20.9		20.9	20.9					47.0	47.0	47.0
Total Split (s)	0.0	23.0	0.0	23.0	23.0	0.0	0.0	0.0	0.0	57.0	57.0	57.0
Total Split (%)	0.0%	28.8%	0.0%	28.8%	28.8%	0.0%	0.0%	0.0%	0.0%	71.3%	71.3%	71.3%
Maximum Green (s)		18.1		18.1	18.1					52.1	52.1	52.1
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		1.7		1.7	1.7					1.7	1.7	1.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.9	3.0	3.9	3.9	3.0	3.0	3.0	3.0	3.9	3.9	3.9
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		19.1			19.1						53.1	53.1
Actuated g/C Ratio		0.24			0.24						0.66	0.66
v/c Ratio		0.17			0.43						0.60	0.33
Control Delay		21.2			28.0						8.6	2.7
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		21.2			28.0						8.6	2.7
LOS		C			C						A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		21.2			28.0						7.6	
Approach LOS		C			C						A	
Stops (vph)		84			236						921	46
Fuel Used(gal)		1			4						14	2
CO Emissions (g/hr)		82			279						991	107
NOx Emissions (g/hr)		16			54						193	21
VOC Emissions (g/hr)		19			65						230	25
Dilemma Vehicles (#)		0			0						0	0
Queue Length 50th (ft)		24			71						179	20
Queue Length 95th (ft)		48			109						217	50
Internal Link Dist (ft)		89			385			269			342	
Turn Bay Length (ft)												
Base Capacity (vph)		818			745						3369	1136
Starvation Cap Reductn		0			0						0	0
Spillback Cap Reductn		0			0						0	0
Storage Cap Reductn		0			0						0	0
Reduced v/c Ratio		0.17			0.43						0.60	0.33

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 10 (13%), Referenced to phase 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 10.6 Intersection LOS: B
Intersection Capacity Utilization 56.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 312: Genesee & Oak

Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	141	320	2007	370
v/c Ratio	0.17	0.43	0.60	0.33
Control Delay	21.2	28.0	8.6	2.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	21.2	28.0	8.6	2.7
Queue Length 50th (ft)	24	71	179	20
Queue Length 95th (ft)	48	109	217	50
Internal Link Dist (ft)	89	385	342	
Turn Bay Length (ft)				
Base Capacity (vph)	818	745	3369	1136
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.43	0.60	0.33

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	116	0	0	113	18	151	1761	174	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.979				0.850			
Flt Protected		0.987						0.996				
Satd. Flow (prot)	0	3493	0	0	3465	0	0	5065	1583	0	0	0
Flt Permitted		0.843						0.996				
Satd. Flow (perm)	0	2984	0	0	3465	0	0	5065	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					15				193			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		465			518			422			260	
Travel Time (s)		10.6			11.8			9.6			5.9	
Peak Hour Factor	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)	47	129	0	0	126	20	168	1957	193	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	176	0	0	146	0	0	2125	193	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm		Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Minimum Split (s)	24.0	24.0			24.0		42.0	42.0	42.0			
Total Split (s)	29.0	29.0	0.0	0.0	29.0	0.0	81.0	81.0	81.0	0.0	0.0	0.0
Total Split (%)	26.4%	26.4%	0.0%	0.0%	26.4%	0.0%	73.6%	73.6%	73.6%	0.0%	0.0%	0.0%
Maximum Green (s)	24.2	24.2			24.2		76.2	76.2	76.2			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	1.6	1.6			1.6		1.6	1.6	1.6			
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.8	3.8	3.0	3.0	3.8	3.0	3.8	3.8	3.8	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)		25.2			25.2			77.2	77.2			
Actuated g/C Ratio		0.23			0.23			0.70	0.70			
v/c Ratio		0.26			0.18			0.60	0.17			
Control Delay		36.0			31.2			21.2	4.9			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		36.0			31.2			21.2	4.9			
LOS		D			C			C	A			
Approach Delay		36.0			31.2			19.9				
Approach LOS		D			C			B				
Stops (vph)		127			92			1726	53			
Fuel Used(gal)		2			2			30	2			
CO Emissions (g/hr)		170			131			2112	112			
NOx Emissions (g/hr)		33			25			411	22			
VOC Emissions (g/hr)		39			30			489	26			
Dilemma Vehicles (#)		0			0			0	0			
Queue Length 50th (ft)		53			39			517	38			
Queue Length 95th (ft)		85			67			596	68			
Internal Link Dist (ft)		385			438			342			180	
Turn Bay Length (ft)									200			
Base Capacity (vph)		684			805			3555	1169			
Starvation Cap Reductn		0			0			0	0			
Spillback Cap Reductn		0			0			0	0			
Storage Cap Reductn		0			0			0	0			
Reduced v/c Ratio		0.26			0.18			0.60	0.17			

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 1 (1%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 70
Control Type: Pretimed
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 21.6 — Intersection LOS: C
Intersection Capacity Utilization 55.2% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 313: Genesee & Elm St

Lane Group	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	176	146	2125	193
v/c Ratio	0.26	0.18	0.60	0.17
Control Delay	36.0	31.2	21.2	4.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	36.0	31.2	21.2	4.9
Queue Length 50th (ft)	53	39	517	38
Queue Length 95th (ft)	85	67	596	68
Internal Link Dist (ft)	385	438	342	
Turn Bay Length (ft)				200
Base Capacity (vph)	684	805	3555	1169
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.18	0.60	0.17

Intersection Summary

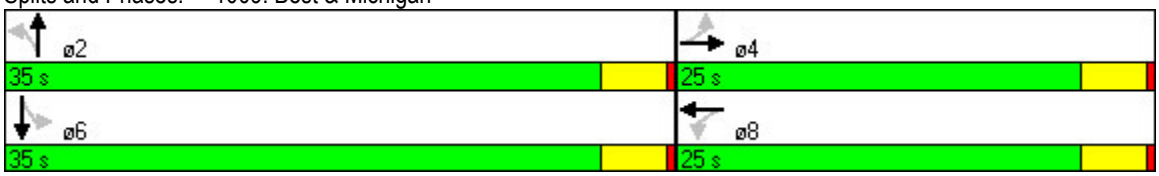
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	177	46	20	150	3	24	95	10	34	149	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973			0.998			0.990			0.994	
Flt Protected		0.999			0.994			0.991			0.991	
Satd. Flow (prot)	0	1811	0	0	1848	0	0	1828	0	0	1835	0
Flt Permitted		0.997			0.956			0.938			0.943	
Satd. Flow (perm)	0	1807	0	0	1777	0	0	1730	0	0	1746	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			2			11			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			349			643			576	
Travel Time (s)		21.9			7.9			14.6			13.1	
Peak Hour Factor	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)	4	197	51	22	167	3	27	106	11	38	166	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	252	0	0	192	0	0	144	0	0	213	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
v/c Ratio		0.37			0.29			0.16			0.23	
Control Delay		14.5			14.9			7.1			8.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.5			14.9			7.1			8.0	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		14.5			14.9			7.1			8.0	
Approach LOS		B			B			A			A	
Stops (vph)		144			115			56			92	
Fuel Used(gal)		3			2			1			2	
CO Emissions (g/hr)		222			114			80			118	
NOx Emissions (g/hr)		43			22			16			23	
VOC Emissions (g/hr)		51			26			19			27	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		58			47			22			36	
Queue Length 95th (ft)		109			90			46			68	
Internal Link Dist (ft)		884			269			563			496	
Turn Bay Length (ft)												
Base Capacity (vph)		678			653			928			934	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.37			0.29			0.16			0.23	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.37
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 39.7% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1009: Best & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	252	192	144	213
v/c Ratio	0.37	0.29	0.16	0.23
Control Delay	14.5	14.9	7.1	8.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.5	14.9	7.1	8.0
Queue Length 50th (ft)	58	47	22	36
Queue Length 95th (ft)	109	90	46	68
Internal Link Dist (ft)	884	269	563	496
Turn Bay Length (ft)				
Base Capacity (vph)	678	653	928	934
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.29	0.16	0.23

Intersection Summary

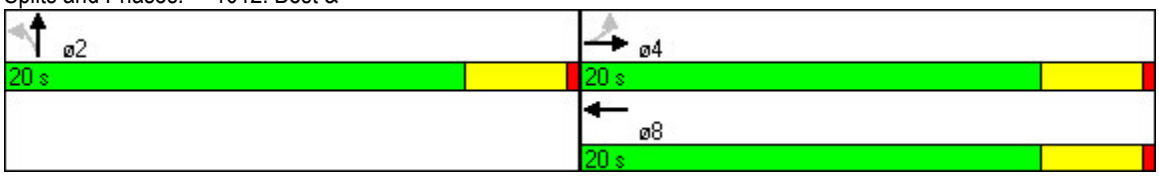
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	124	0	0	129	30	32	33	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.975			0.961				
Flt Protected		0.998						0.982				
Satd. Flow (prot)	0	1859	0	0	1816	0	0	3340	0	0	0	0
Flt Permitted		0.988						0.982				
Satd. Flow (perm)	0	1840	0	0	1816	0	0	3340	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					33			26				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		178			964			653			187	
Travel Time (s)		4.0			21.9			14.8			4.3	
Peak Hour Factor	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)	7	138	0	0	143	33	36	37	26	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	145	0	0	176	0	0	99	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	20.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	0.0%	50.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0			16.0		16.0	16.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.0			17.0			17.0				
Actuated g/C Ratio		0.42			0.42			0.42				
v/c Ratio		0.19			0.22			0.07				
Control Delay		8.0			6.9			5.6				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.0			6.9			5.6				
LOS		A			A			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.0			6.9			5.6				
Approach LOS		A			A			A				
Stops (vph)		74			76			40				
Fuel Used(gal)		1			2			1				
CO Emissions (g/hr)		89			128			54				
NOx Emissions (g/hr)		17			25			11				
VOC Emissions (g/hr)		21			30			13				
Dilemma Vehicles (#)		0			0			0				
Queue Length 50th (ft)		19			18			4				
Queue Length 95th (ft)		42			45			13				
Internal Link Dist (ft)		98			884			573			107	
Turn Bay Length (ft)												
Base Capacity (vph)		782			791			1434				
Starvation Cap Reductn		0			0			0				
Spillback Cap Reductn		0			0			0				
Storage Cap Reductn		0			0			0				
Reduced v/c Ratio		0.19			0.22			0.07				

Intersection Summary

Area Type: Other
Cycle Length: 40
Actuated Cycle Length: 40
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.22
Intersection Signal Delay: 7.0 — Intersection LOS: A
Intersection Capacity Utilization 21.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1012: Best &



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	145	176	99
v/c Ratio	0.19	0.22	0.07
Control Delay	8.0	6.9	5.6
Queue Delay	0.0	0.0	0.0
Total Delay	8.0	6.9	5.6
Queue Length 50th (ft)	19	18	4
Queue Length 95th (ft)	42	45	13
Internal Link Dist (ft)	98	884	573
Turn Bay Length (ft)			
Base Capacity (vph)	782	791	1434
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.19	0.22	0.07

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	70	106	20	142	390	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.919				0.989	
Flt Protected	0.980			0.994		
Satd. Flow (prot)	1678	0	0	3518	5029	0
Flt Permitted	0.980			0.891		
Satd. Flow (perm)	1678	0	0	3153	5029	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	99				29	
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			287	353	
Travel Time (s)	7.3			6.5	8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	118	22	158	433	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	196	0	0	180	466	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Minimum Split (s)	20.0		20.0	20.0	20.0	
Total Split (s)	27.0	0.0	52.0	52.0	52.0	0.0
Total Split (%)	34.2%	0.0%	65.8%	65.8%	65.8%	0.0%
Maximum Green (s)	23.0		48.0	48.0	48.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	24.0			49.0	49.0	
Actuated g/C Ratio	0.30			0.62	0.62	
v/c Ratio	0.34			0.09	0.15	
Control Delay	12.6			6.2	6.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	12.6			6.2	6.0	
LOS	B			A	A	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay	12.6			6.2	6.0	
Approach LOS	B			A	A	
Stops (vph)	69			59	149	
Fuel Used(gal)	1			1	2	
CO Emissions (g/hr)	89			62	174	
NOx Emissions (g/hr)	17			12	34	
VOC Emissions (g/hr)	21			14	40	
Dilemma Vehicles (#)	0			0	0	
Queue Length 50th (ft)	35			16	29	
Queue Length 95th (ft)	86			28	42	
Internal Link Dist (ft)	239			207	273	
Turn Bay Length (ft)						
Base Capacity (vph)	579			1956	3130	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.34			0.09	0.15	

Intersection Summary

Area Type: Other
Cycle Length: 79
Actuated Cycle Length: 79
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 40
Control Type: Pretimed
Maximum v/c Ratio: 0.34
Intersection Signal Delay: 7.6 Intersection LOS: A
Intersection Capacity Utilization 33.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1034: Allen & Main

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	196	180	466
v/c Ratio	0.34	0.09	0.15
Control Delay	12.6	6.2	6.0
Queue Delay	0.0	0.0	0.0
Total Delay	12.6	6.2	6.0
Queue Length 50th (ft)	35	16	29
Queue Length 95th (ft)	86	28	42
Internal Link Dist (ft)	239	207	273
Turn Bay Length (ft)			
Base Capacity (vph)	579	1956	3130
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.34	0.09	0.15

Intersection Summary

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	604	889	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.88	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	3539	2787	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	3539	2787	0	0	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	260			560	477	
Travel Time (s)	5.9			12.7	10.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	671	988	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	671	988	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	414	0	0	0	0	889
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			969	284	
Travel Time (s)	7.3			22.0	6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	460	0	0	0	0	988
Shared Lane Traffic (%)						
Lane Group Flow (vph)	460	0	0	0	0	988
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	243	2666	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	3539	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	422			611	490	
Travel Time (s)	9.6			13.9	11.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	270	2962	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	270	2962	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 215.0%	ICU Level of Service H
Analysis Period (min) 15	

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	2666	2571	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	3433	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	3433	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	223			542	780	
Travel Time (s)	5.1			12.3	17.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	2962	2857	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	2962	2857	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 215.0%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	471	94	111	378
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.975			
Flt Protected						0.989
Satd. Flow (prot)	0	0	3451	0	0	3500
Flt Permitted						0.989
Satd. Flow (perm)	0	0	3451	0	0	3500
Link Speed (mph)	30		30			30
Link Distance (ft)	547		441			294
Travel Time (s)	12.4		10.0			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	523	104	123	420
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	627	0	0	543
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	471	94	111	378
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	523	104	123	420
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			441			636
pX, platoon unblocked	0.98	0.98			0.98	
vC, conflicting volume	1032	314			628	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	907	268			587	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			87	
cM capacity (veh/h)	235	718			967	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	349	279	263	280
Volume Left	0	0	123	0
Volume Right	0	104	0	0
cSH	1700	1700	967	1700
Volume to Capacity	0.21	0.16	0.13	0.16
Queue Length 95th (ft)	0	0	11	0
Control Delay (s)	0.0	0.0	5.0	0.0
Lane LOS			A	
Approach Delay (s)	0.0		2.4	
Approach LOS				

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	120	53	38	134	49	29	230	25	60	419	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.966			0.970			0.987			0.992	
Flt Protected		0.991			0.992			0.995			0.994	
Satd. Flow (prot)	0	1783	0	0	1792	0	0	3476	0	0	5014	0
Flt Permitted		0.882			0.896			0.875			0.888	
Satd. Flow (perm)	0	1587	0	0	1619	0	0	3057	0	0	4480	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			19			13			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		111			158			910			474	
Travel Time (s)		2.5			3.6			20.7			10.8	
Peak Hour Factor	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)	42	133	59	42	149	54	32	256	28	67	466	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	234	0	0	245	0	0	316	0	0	562	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	1 6	
Permitted Phases	4			8			2			1 6		
Detector Phase	4	4		8	8		2	2		1	1 6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		10.0		
Total Split (s)	33.0	33.0	0.0	33.0	33.0	0.0	29.0	29.0	0.0	22.0	73.0	0.0
Total Split (%)	39.3%	39.3%	0.0%	39.3%	39.3%	0.0%	34.5%	34.5%	0.0%	26.2%	86.9%	0.0%
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		16.0		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		5.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5		

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	51.0
Total Split (%)	61%
Maximum Green (s)	47.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-3.0	-3.0	-1.0
Total Lost Time (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
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		
Recall Mode	Min	Min		Min	Min		Max	Max		Max		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0	0		0	0				
Act Effct Green (s)		15.7			15.7			26.1			48.2	
Actuated g/C Ratio		0.22			0.22			0.37			0.69	
v/c Ratio		0.63			0.65			0.27			0.17	
Control Delay		29.7			30.9			16.3			4.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		29.7			30.9			16.3			4.3	
LOS		C			C			B			A	
Approach Delay		29.7			30.9			16.3			4.3	
Approach LOS		C			C			B			A	
90th %ile Green (s)	21.4	21.4		21.4	21.4		25.0	25.0		16.0		
90th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR		
70th %ile Green (s)	17.2	17.2		17.2	17.2		25.0	25.0		16.0		
70th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR		
50th %ile Green (s)	14.6	14.6		14.6	14.6		25.0	25.0		16.0		
50th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR		
30th %ile Green (s)	12.2	12.2		12.2	12.2		25.0	25.0		16.0		
30th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR		
10th %ile Green (s)	9.0	9.0		9.0	9.0		25.0	25.0		16.0		
10th %ile Term Code	Hold	Hold		Gap	Gap		MaxR	MaxR		MaxR		
Stops (vph)		162			174			180			156	
Fuel Used(gal)		2			3			4			3	
CO Emissions (g/hr)		165			241			276			222	
NOx Emissions (g/hr)		32			47			54			43	
VOC Emissions (g/hr)		38			56			64			51	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		82			88			46			24	
Queue Length 95th (ft)		148			156			86			48	
Internal Link Dist (ft)		31			78			830			394	
Turn Bay Length (ft)												
Base Capacity (vph)		697			708			1150			3239	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.34			0.35			0.27			0.17	

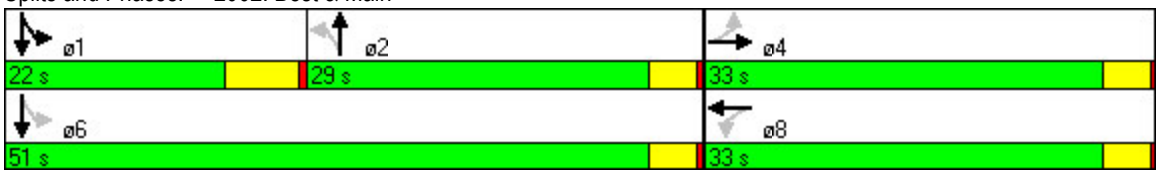
Intersection Summary	
Area Type:	Other
Cycle Length: 84	
Actuated Cycle Length: 69.9	
Natural Cycle: 50	

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	47.0
90th %ile Term Code	MaxR
70th %ile Green (s)	47.0
70th %ile Term Code	MaxR
50th %ile Green (s)	47.0
50th %ile Term Code	MaxR
30th %ile Green (s)	47.0
30th %ile Term Code	MaxR
10th %ile Green (s)	47.0
10th %ile Term Code	MaxR
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 16.3	Intersection LOS: B
Intersection Capacity Utilization 43.9%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 76.4	
70th %ile Actuated Cycle: 72.2	
50th %ile Actuated Cycle: 69.6	
30th %ile Actuated Cycle: 67.2	
10th %ile Actuated Cycle: 64	

Splits and Phases: 2002: Best & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	234	245	316	562
v/c Ratio	0.63	0.65	0.27	0.17
Control Delay	29.7	30.9	16.3	4.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	29.7	30.9	16.3	4.3
Queue Length 50th (ft)	82	88	46	24
Queue Length 95th (ft)	148	156	86	48
Internal Link Dist (ft)	31	78	830	394
Turn Bay Length (ft)				
Base Capacity (vph)	697	708	1150	3239
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.34	0.35	0.27	0.17

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	113	86	24	119	19	74	219	16	34	458	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.950			0.984			0.992			0.977	
Flt Protected		0.993			0.993			0.988			0.997	
Satd. Flow (prot)	0	1757	0	0	1820	0	0	3469	0	0	4953	0
Flt Permitted		0.950			0.932			0.777			0.907	
Satd. Flow (perm)	0	1681	0	0	1708	0	0	2728	0	0	4506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			10			12			55	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		250			335			338			910	
Travel Time (s)		5.7			7.6			7.7			20.7	
Peak Hour Factor	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)	37	126	96	27	132	21	82	243	18	38	509	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	259	0	0	180	0	0	343	0	0	644	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	14.0	60.0	0.0	32.0	32.0	0.0
Total Split (%)	38.7%	38.7%	0.0%	38.7%	38.7%	0.0%	18.7%	80.0%	0.0%	42.7%	42.7%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0			28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	46.0
Total Split (%)	61%
Maximum Green (s)	42.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		None			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		14.4			14.4			41.1			29.2	
Actuated g/C Ratio		0.23			0.23			0.67			0.47	
v/c Ratio		0.61			0.44			0.18			0.30	
Control Delay		23.8			22.4			4.5			10.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.8			22.4			4.5			10.3	
LOS		C			C			A			B	
Approach Delay		23.8			22.4			4.5			10.3	
Approach LOS		C			C			A			B	
90th %ile Green (s)	20.3	20.3		20.3	20.3		10.0			28.0	28.0	
90th %ile Term Code	Gap	Gap		Hold	Hold		Max			MaxR	MaxR	
70th %ile Green (s)	16.0	16.0		16.0	16.0		8.5			28.0	28.0	
70th %ile Term Code	Gap	Gap		Hold	Hold		Gap			MaxR	MaxR	
50th %ile Green (s)	13.3	13.3		13.3	13.3		7.6			28.0	28.0	
50th %ile Term Code	Gap	Gap		Hold	Hold		Gap			MaxR	MaxR	
30th %ile Green (s)	10.9	10.9		10.9	10.9		6.9			28.0	28.0	
30th %ile Term Code	Gap	Gap		Hold	Hold		Gap			MaxR	MaxR	
10th %ile Green (s)	7.8	7.8		7.8	7.8		6.2			28.0	28.0	
10th %ile Term Code	Gap	Gap		Hold	Hold		Gap			MaxR	MaxR	
Stops (vph)		162			120			99			303	
Fuel Used(gal)		2			2			2			7	
CO Emissions (g/hr)		173			154			115			490	
NOx Emissions (g/hr)		34			30			22			95	
VOC Emissions (g/hr)		40			36			27			114	
Dilemma Vehicles (#)		0			0			0			0	
Queue Length 50th (ft)		70			53			18			44	
Queue Length 95th (ft)		139			106			44			86	
Internal Link Dist (ft)		170			255			258			830	
Turn Bay Length (ft)												
Base Capacity (vph)		741			734			2060			2171	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.35			0.25			0.17			0.30	

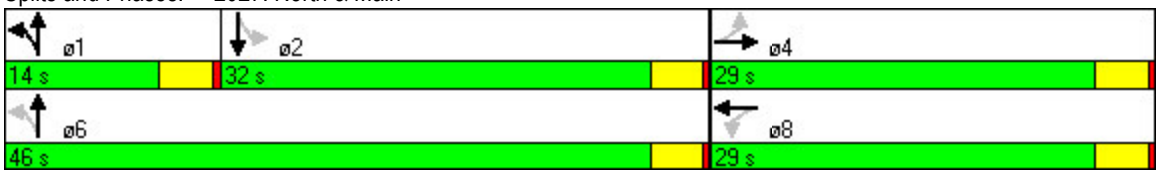
Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 61.5	
Natural Cycle: 50	

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
90th %ile Green (s)	42.0
90th %ile Term Code	Hold
70th %ile Green (s)	40.5
70th %ile Term Code	Hold
50th %ile Green (s)	39.6
50th %ile Term Code	Hold
30th %ile Green (s)	38.9
30th %ile Term Code	Hold
10th %ile Green (s)	38.2
10th %ile Term Code	Hold
Stops (vph)	
Fuel Used(gal)	
CO Emissions (g/hr)	
NOx Emissions (g/hr)	
VOC Emissions (g/hr)	
Dilemma Vehicles (#)	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 47.4%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 70.3	
70th %ile Actuated Cycle: 64.5	
50th %ile Actuated Cycle: 60.9	
30th %ile Actuated Cycle: 57.8	
10th %ile Actuated Cycle: 54	

Splits and Phases: 2027: North & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	259	180	343	644
v/c Ratio	0.61	0.44	0.18	0.30
Control Delay	23.8	22.4	4.5	10.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.8	22.4	4.5	10.3
Queue Length 50th (ft)	70	53	18	44
Queue Length 95th (ft)	139	106	44	86
Internal Link Dist (ft)	170	255	258	830
Turn Bay Length (ft)				
Base Capacity (vph)	741	734	2060	2171
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.25	0.17	0.30

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	6	30	329	22	33	718
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.889		0.991			
Flt Protected	0.991					0.998
Satd. Flow (prot)	1495	0	3343	0	0	5026
Flt Permitted	0.991					0.910
Satd. Flow (perm)	1495	0	3343	0	0	4583
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	33		16			
Link Speed (mph)	30		30			30
Link Distance (ft)	383		474			728
Travel Time (s)	8.7		10.8			16.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	12%	12%	7%	7%	3%	3%
Adj. Flow (vph)	7	33	366	24	37	798
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	390	0	0	835
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Maximum Green (s)	21.0		51.0		51.0	51.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	6.5		68.1			68.1
Actuated g/C Ratio	0.08		0.89			0.89
v/c Ratio	0.26		0.13			0.21
Control Delay	19.6		1.3			1.4
Queue Delay	0.0		0.0			0.0
Total Delay	19.6		1.3			1.4
LOS	B		A			A
Approach Delay	19.6		1.3			1.4
Approach LOS	B		A			A
90th %ile Green (s)	8.8		66.0		66.0	66.0
90th %ile Term Code	Gap		Dwell		Dwell	Dwell
70th %ile Green (s)	7.0		66.0		66.0	66.0
70th %ile Term Code	Gap		Dwell		Dwell	Dwell
50th %ile Green (s)	5.8		66.0		66.0	66.0
50th %ile Term Code	Gap		Dwell		Dwell	Dwell
30th %ile Green (s)	0.0		66.0		66.0	66.0
30th %ile Term Code	Skip		Dwell		Dwell	Dwell
10th %ile Green (s)	0.0		66.0		66.0	66.0
10th %ile Term Code	Skip		Dwell		Dwell	Dwell
Stops (vph)	15		43			99
Fuel Used(gal)	0		2			5
CO Emissions (g/hr)	23		114			351
NOx Emissions (g/hr)	5		22			68
VOC Emissions (g/hr)	5		26			81
Dilemma Vehicles (#)	0		0			0
Queue Length 50th (ft)	3		12			20
Queue Length 95th (ft)	32		24			36
Internal Link Dist (ft)	303		394			648
Turn Bay Length (ft)						
Base Capacity (vph)	436		2970			4069
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.09		0.13			0.21

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 76.7	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.26	
Intersection Signal Delay: 1.9	Intersection LOS: A
Intersection Capacity Utilization 37.7%	ICU Level of Service A
Analysis Period (min) 15	
90th %ile Actuated Cycle: 82.8	
70th %ile Actuated Cycle: 81	
50th %ile Actuated Cycle: 79.8	
30th %ile Actuated Cycle: 70	
10th %ile Actuated Cycle: 70	

Splits and Phases: 2101: Dodge & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	40	390	835
v/c Ratio	0.26	0.13	0.21
Control Delay	19.6	1.3	1.4
Queue Delay	0.0	0.0	0.0
Total Delay	19.6	1.3	1.4
Queue Length 50th (ft)	3	12	20
Queue Length 95th (ft)	32	24	36
Internal Link Dist (ft)	303	394	648
Turn Bay Length (ft)			
Base Capacity (vph)	436	2970	4069
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.09	0.13	0.21

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	38	90	15	27	2	50	168	8	5	486	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.915			0.994			0.995			0.998	
Flt Protected		0.995			0.983			0.989			0.999	
Satd. Flow (prot)	0	1696	0	0	1820	0	0	1833	0	0	1857	0
Flt Permitted		0.963			0.878			0.897			0.997	
Satd. Flow (perm)	0	1641	0	0	1626	0	0	1663	0	0	1853	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		100			2			5			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			388			675			662	
Travel Time (s)		8.6			8.8			15.3			15.0	
Peak Hour Factor	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)	17	42	100	17	30	2	56	187	9	6	540	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	159	0	0	49	0	0	252	0	0	556	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	14.0	51.0	0.0	23.0	23.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%	23.3%	85.0%	0.0%	38.3%	38.3%	0.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		10.0			19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	37.0
Total Split (%)	62%
Maximum Green (s)	33.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		Max			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		8.6			8.6			34.5			20.3	
Actuated g/C Ratio		0.18			0.18			0.74			0.43	
v/c Ratio		0.41			0.16			0.20			0.69	
Control Delay		11.6			17.4			3.3			18.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.6			17.4			3.3			18.9	
LOS		B			B			A			B	
Approach Delay		11.6			17.4			3.3			18.9	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 46.8
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 13.8 — Intersection LOS: B
Intersection Capacity Utilization 57.3% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Carlton & Michigan

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	159	49	252	556
v/c Ratio	0.41	0.16	0.20	0.69
Control Delay	11.6	17.4	3.3	18.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.6	17.4	3.3	18.9
Queue Length 50th (ft)	14	11	16	122
Queue Length 95th (ft)	53	33	46	#293
Internal Link Dist (ft)	297	308	595	582
Turn Bay Length (ft)				
Base Capacity (vph)	768	706	1267	804
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.07	0.20	0.69

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	87	0	0	132	25	45	116	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.978			0.980				
Flt Protected		0.996						0.988				
Satd. Flow (prot)	0	1855	0	0	1822	0	0	3427	0	0	0	0
Flt Permitted		0.996						0.988				
Satd. Flow (perm)	0	1855	0	0	1822	0	0	3427	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			658	
Travel Time (s)		7.4			17.0			9.7			15.0	
Peak Hour Factor	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)	8	97	0	0	147	28	50	129	28	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	105	0	0	175	0	0	207	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	7	87	0	0	132	25	45	116	25	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	8	97	0	0	147	28	50	129	28	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total (vph)	104	174	114	92
Volume Left (vph)	8	0	50	0
Volume Right (vph)	0	28	0	28
Hadj (s)	0.05	-0.06	0.25	-0.18
Departure Headway (s)	4.7	4.5	5.4	5.0
Degree Utilization, x	0.14	0.22	0.17	0.13
Capacity (veh/h)	724	762	635	687
Control Delay (s)	8.4	8.7	8.3	7.5
Approach Delay (s)	8.4	8.7	8.0	
Approach LOS	A	A	A	

Intersection Summary			
Delay	8.3		
HCM Level of Service	A		
Intersection Capacity Utilization	22.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	36	48	70	132	6	13	56	20	14	65	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.928			0.996			0.970			0.990	
Flt Protected		0.997			0.983			0.993			0.992	
Satd. Flow (prot)	0	1723	0	0	1824	0	0	1794	0	0	3476	0
Flt Permitted		0.997			0.983			0.993			0.992	
Satd. Flow (perm)	0	1723	0	0	1824	0	0	1794	0	0	3476	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		287			325			1308			645	
Travel Time (s)		6.5			7.4			29.7			14.7	
Peak Hour Factor	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)	7	40	53	78	147	7	14	62	22	16	72	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	232	0	0	98	0	0	94	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 36.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	6	36	48	70	132	6	13	56	20	14	65	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	40	53	78	147	7	14	62	22	16	72	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	100	231	99	52	42
Volume Left (vph)	7	78	14	16	0
Volume Right (vph)	53	7	22	0	6
Hadj (s)	-0.27	0.08	-0.07	0.18	-0.06
Departure Headway (s)	4.4	4.6	4.9	5.6	5.3
Degree Utilization, x	0.12	0.29	0.13	0.08	0.06
Capacity (veh/h)	771	746	689	600	628
Control Delay (s)	8.0	9.5	8.6	7.9	7.5
Approach Delay (s)	8.0	9.5	8.6	7.7	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	8.7		
HCM Level of Service	A		
Intersection Capacity Utilization	36.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	150	275	9	73	396
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.893		0.995			
Flt Protected	0.990					0.992
Satd. Flow (prot)	1647	0	5060	0	0	3511
Flt Permitted	0.990					0.992
Satd. Flow (perm)	1647	0	5060	0	0	3511
Link Speed (mph)	30		30			30
Link Distance (ft)	287		565			287
Travel Time (s)	6.5		12.8			6.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	167	306	10	81	440
Shared Lane Traffic (%)						
Lane Group Flow (vph)	211	0	316	0	0	521
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 40.0%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	40	150	275	9	73	396
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	44	167	306	10	81	440
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			565			287
pX, platoon unblocked	1.00					
vC, conflicting volume	693	107			316	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	683	107			316	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	88	82			93	
cM capacity (veh/h)	356	927			1241	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	211	122	122	71	228	293
Volume Left	44	0	0	0	81	0
Volume Right	167	0	0	10	0	0
cSH	693	1700	1700	1700	1241	1700
Volume to Capacity	0.30	0.07	0.07	0.04	0.07	0.17
Queue Length 95th (ft)	32	0	0	0	5	0
Control Delay (s)	12.5	0.0	0.0	0.0	3.3	0.0
Lane LOS	B				A	
Approach Delay (s)	12.5	0.0			1.4	
Approach LOS	B					

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	43	59	1	19	5	46	127	11	29	314	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.931			0.971			0.992			0.977	
Flt Protected		0.994			0.998			0.988			0.996	
Satd. Flow (prot)	0	1724	0	0	1805	0	0	1826	0	0	3444	0
Flt Permitted		0.974			0.994			0.850			0.930	
Satd. Flow (perm)	0	1689	0	0	1798	0	0	1571	0	0	3216	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		66			6			10			64	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1103			233			662			363	
Travel Time (s)		25.1			5.3			15.0			8.3	
Peak Hour Factor	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)	16	48	66	1	21	6	51	141	12	32	349	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	0	0	28	0	0	204	0	0	450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.25			0.05			0.21			0.22	
Control Delay		10.6			13.8			5.5			4.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.6			13.8			5.5			4.7	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.6			13.8			5.5			4.7	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.25	
Intersection Signal Delay: 6.1	Intersection LOS: A
Intersection Capacity Utilization 43.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: High & Michigan

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	130	28	204	450
v/c Ratio	0.25	0.05	0.21	0.22
Control Delay	10.6	13.8	5.5	4.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	13.8	5.5	4.7
Queue Length 50th (ft)	17	6	26	27
Queue Length 95th (ft)	53	22	51	44
Internal Link Dist (ft)	1023	153	582	283
Turn Bay Length (ft)				
Base Capacity (vph)	526	514	973	2008
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.05	0.21	0.22

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	132	0	0	99	33	39	94	67	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.966			0.950				
Flt Protected		0.994						0.990				
Satd. Flow (prot)	0	1852	0	0	1799	0	0	3329	0	0	0	0
Flt Permitted		0.964						0.990				
Satd. Flow (perm)	0	1796	0	0	1799	0	0	3329	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					32			74				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			1103			658			365	
Travel Time (s)		7.8			25.1			15.0			8.3	
Peak Hour Factor	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)	20	147	0	0	110	37	43	104	74	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	167	0	0	147	0	0	221	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	23.0	23.0	0.0	0.0	23.0	0.0	35.0	35.0	0.0	0.0	0.0	0.0
Total Split (%)	39.7%	39.7%	0.0%	0.0%	39.7%	0.0%	60.3%	60.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	19.0	19.0			19.0		31.0	31.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		20.0			20.0			32.0				
Actuated g/C Ratio		0.34			0.34			0.55				
v/c Ratio		0.27			0.23			0.12				
Control Delay		15.2			11.8			4.3				
Queue Delay		0.0			0.0			0.0				
Total Delay		15.2			11.8			4.3				
LOS		B			B			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		15.2			11.8			4.3				
Approach LOS		B			B			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBT, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.27	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 31.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: High & Ellicott

Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	167	147	221
v/c Ratio	0.27	0.23	0.12
Control Delay	15.2	11.8	4.3
Queue Delay	0.0	0.0	0.0
Total Delay	15.2	11.8	4.3
Queue Length 50th (ft)	41	27	11
Queue Length 95th (ft)	80	62	24
Internal Link Dist (ft)	262	1023	578
Turn Bay Length (ft)			
Base Capacity (vph)	619	641	1870
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.27	0.23	0.12

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lane Configurations							
Volume (vph)	58	101	391	43	87	467	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95	
Frt	0.914		0.985				
Flt Protected	0.982					0.992	
Satd. Flow (prot)	1672	0	5009	0	0	3511	
Flt Permitted	0.982					0.828	
Satd. Flow (perm)	1672	0	5009	0	0	2930	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	112		30				
Link Speed (mph)	30		30			30	
Link Distance (ft)	293		353			353	
Travel Time (s)	6.7		8.0			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	64	112	434	48	97	519	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	176	0	482	0	0	616	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		1		1	1	
Detector Template							
Leading Detector (ft)	50		50		50	50	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	50		50		50	50	
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Turn Type					custom		
Protected Phases	8		2		1	1 6	6
Permitted Phases					6		
Detector Phase	8		2		1	1 6	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0		4.0
Minimum Split (s)	20.0		20.0		8.0		20.0
Total Split (s)	27.0	0.0	36.0	0.0	14.0	64.0	50.0
Total Split (%)	35.1%	0.0%	46.8%	0.0%	18.2%	83.1%	65%
Maximum Green (s)	23.0		32.0		10.0		46.0
Yellow Time (s)	3.5		3.5		3.5		3.5
All-Red Time (s)	0.5		0.5		0.5		0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lead/Lag			Lag		Lead		
Lead-Lag Optimize?			Yes		Yes		
Vehicle Extension (s)	3.0		3.0		3.0		3.0
Recall Mode	Min		Max		None		Max
Walk Time (s)	5.0		5.0				5.0
Flash Dont Walk (s)	11.0		11.0				11.0
Pedestrian Calls (#/hr)	0		0				0
Act Effct Green (s)	9.3		34.2			47.1	
Actuated g/C Ratio	0.15		0.55			0.75	
v/c Ratio	0.51		0.17			0.27	
Control Delay	15.7		7.4			2.9	
Queue Delay	0.0		0.0			0.0	
Total Delay	15.7		7.4			2.9	
LOS	B		A			A	
Approach Delay	15.7		7.4			2.9	
Approach LOS	B		A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 77	
Actuated Cycle Length: 62.4	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 43.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: High & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	176	482	616
v/c Ratio	0.51	0.17	0.27
Control Delay	15.7	7.4	2.9
Queue Delay	0.0	0.0	0.0
Total Delay	15.7	7.4	2.9
Queue Length 50th (ft)	22	28	24
Queue Length 95th (ft)	70	52	54
Internal Link Dist (ft)	213	273	273
Turn Bay Length (ft)			
Base Capacity (vph)	713	2763	2314
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.25	0.17	0.27

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	17	169	0	0	0	36	239	10	7	415	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.882						0.995			0.994	
Flt Protected		0.998						0.994			0.999	
Satd. Flow (prot)	0	1640	0	0	0	0	0	1842	0	0	1850	0
Flt Permitted		0.998						0.919			0.995	
Satd. Flow (perm)	0	1640	0	0	0	0	0	1703	0	0	1842	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		188						6			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			376			922			675	
Travel Time (s)		8.3			8.5			21.0			15.3	
Peak Hour Factor	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)	8	19	188	0	0	0	40	266	11	8	461	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	215	0	0	0	0	0	317	0	0	489	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm			Perm		
Protected Phases		4						2			6	
Permitted Phases	4						2			6		
Minimum Split (s)	20.0	20.0					20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0					36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5					3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5					0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0					5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.0						37.0			37.0	
Actuated g/C Ratio		0.28						0.62			0.62	
v/c Ratio		0.36						0.30			0.43	
Control Delay		6.2						6.2			7.4	
Queue Delay		0.0						0.0			0.0	
Total Delay		6.2						6.2			7.4	
LOS		A						A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		6.2						6.2			7.4	
Approach LOS		A						A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 53.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Virginia & Michigan

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	215	317	489
v/c Ratio	0.36	0.30	0.43
Control Delay	6.2	6.2	7.4
Queue Delay	0.0	0.0	0.0
Total Delay	6.2	6.2	7.4
Queue Length 50th (ft)	7	45	77
Queue Length 95th (ft)	50	80	130
Internal Link Dist (ft)	283	842	595
Turn Bay Length (ft)			
Base Capacity (vph)	599	1052	1139
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.36	0.30	0.43

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	40	219	56	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt		0.865	0.970			
Flt Protected						
Satd. Flow (prot)	0	1611	3433	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	3433	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	735		148			425
Travel Time (s)	16.7		3.4			9.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	44	243	62	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	44	305	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 17.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	40	219	56	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	44	243	62	0	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)			939			
pX, platoon unblocked						
vC, conflicting volume	274	153			306	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	274	153			306	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	95			100	
cM capacity (veh/h)	692	866			1252	

Direction, Lane #	WB 1	NB 1	NB 2
Volume Total	44	162	143
Volume Left	0	0	0
Volume Right	44	0	62
cSH	866	1700	1700
Volume to Capacity	0.05	0.10	0.08
Queue Length 95th (ft)	4	0	0
Control Delay (s)	9.4	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.4	0.0	
Approach LOS	A		

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	17.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	116	17	10	125	17	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.983				0.916	
Flt Protected				0.996	0.981	
Satd. Flow (prot)	1831	0	0	1855	1674	0
Flt Permitted				0.996	0.981	
Satd. Flow (perm)	1831	0	0	1855	1674	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	747			377	583	
Travel Time (s)	17.0			8.6	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	129	19	11	139	19	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	148	0	0	150	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	116	17	10	125	17	28
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	129	19	11	139	19	31

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	148	150	50
Volume Left (vph)	0	11	19
Volume Right (vph)	19	0	31
Hadj (s)	-0.04	0.05	-0.26
Departure Headway (s)	4.1	4.2	4.3
Degree Utilization, x	0.17	0.18	0.06
Capacity (veh/h)	854	838	782
Control Delay (s)	8.0	8.1	7.5
Approach Delay (s)	8.0	8.1	7.5
Approach LOS	A	A	A

Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	24.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	3	49	23	11	232	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.957		0.982	
Flt Protected		0.997			0.959	
Satd. Flow (prot)	0	1857	1783	0	1754	0
Flt Permitted		0.997			0.959	
Satd. Flow (perm)	0	1857	1783	0	1754	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		735	363		583	
Travel Time (s)		16.7	8.3		13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	54	26	12	258	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	57	38	0	298	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 26.7%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	3	49	23	11	232	36
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)	3	54	26	12	258	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			363			
pX, platoon unblocked						
vC, conflicting volume	38				93	32
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	38				93	32
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				72	96
cM capacity (veh/h)	1573				905	1042

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	58	38	298
Volume Left	3	0	258
Volume Right	0	12	40
cSH	1573	1700	922
Volume to Capacity	0.00	0.02	0.32
Queue Length 95th (ft)	0	0	35
Control Delay (s)	0.4	0.0	10.8
Lane LOS	A		B
Approach Delay (s)	0.4	0.0	10.8
Approach LOS			B

Intersection Summary			
Average Delay	8.2		
Intersection Capacity Utilization	26.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	237	260	0	0	0	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.921					0.865
Flt Protected						
Satd. Flow (prot)	3260	0	0	0	0	1611
Flt Permitted						
Satd. Flow (perm)	3260	0	0	0	0	1611
Link Speed (mph)	30			30	30	
Link Distance (ft)	791			148	443	
Travel Time (s)	18.0			3.4	10.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	263	289	0	0	0	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	552	0	0	0	0	47
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 24.9%	ICU Level of Service A
Analysis Period (min) 15	

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	237	260	0	0	0	42
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)	263	289	0	0	0	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	791					
pX, platoon unblocked						
vC, conflicting volume			552		408	276
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			552		408	276
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		100	94
cM capacity (veh/h)			1014		571	721

Direction, Lane #	NB 1	NB 2	NW 1
Volume Total	176	377	47
Volume Left	0	0	0
Volume Right	0	289	47
cSH	1700	1700	721
Volume to Capacity	0.10	0.22	0.06
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.0	0.0	10.3
Lane LOS			B
Approach Delay (s)	0.0		10.3
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	97	0	0	110	11	112	101	84	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.988			0.958				
Flt Protected		0.990						0.982				
Satd. Flow (prot)	0	1844	0	0	1840	0	0	3330	0	0	0	0
Flt Permitted		0.990						0.982				
Satd. Flow (perm)	0	1844	0	0	1840	0	0	3330	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			1080			316			653	
Travel Time (s)		6.8			24.5			7.2			14.8	
Peak Hour Factor	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)	26	108	0	0	122	12	124	112	93	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	134	0	0	134	0	0	329	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 31.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	23	97	0	0	110	11	112	101	84	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	26	108	0	0	122	12	124	112	93	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total (vph)	133	134	181	149
Volume Left (vph)	26	0	124	0
Volume Right (vph)	0	12	0	93
Hadj (s)	0.07	-0.02	0.38	-0.40
Departure Headway (s)	5.0	4.9	5.6	4.8
Degree Utilization, x	0.18	0.18	0.28	0.20
Capacity (veh/h)	682	695	625	723
Control Delay (s)	9.1	8.9	9.5	7.7
Approach Delay (s)	9.1	8.9	8.7	
Approach LOS	A	A	A	

Intersection Summary			
Delay	8.8		
HCM Level of Service	A		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	102	71	32	70	14	31	103	44	16	161	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.946			0.983				0.850		0.991	
Flt Protected		0.999			0.986			0.989			0.996	
Satd. Flow (prot)	0	1760	0	0	1805	0	0	1842	1583	0	1839	0
Flt Permitted		0.994			0.807			0.922			0.979	
Satd. Flow (perm)	0	1752	0	0	1478	0	0	1717	1583	0	1807	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			9				49		11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			412			330			643	
Travel Time (s)		24.5			9.4			7.5			14.6	
Peak Hour Factor	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)	4	113	79	36	78	16	34	114	49	18	179	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	196	0	0	130	0	0	148	49	0	211	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	51.0	51.0	51.0	51.0	51.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	28.2%	28.2%	0.0%	71.8%	71.8%	71.8%	71.8%	71.8%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		12.2			12.2			51.0	51.0		51.0	
Actuated g/C Ratio		0.18			0.18			0.74	0.74		0.74	
v/c Ratio		0.57			0.49			0.12	0.04		0.16	
Control Delay		25.6			28.9			3.5	1.3		3.4	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		25.6			28.9			3.5	1.3		3.4	
LOS		C			C			A	A		A	
Approach Delay		25.6			28.9			2.9			3.4	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 71
Actuated Cycle Length: 69.2
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 13.7 — Intersection LOS: B
Intersection Capacity Utilization 43.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 21: North & Michigan

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	196	130	148	49	211
v/c Ratio	0.57	0.49	0.12	0.04	0.16
Control Delay	25.6	28.9	3.5	1.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	28.9	3.5	1.3	3.4
Queue Length 50th (ft)	55	44	14	0	19
Queue Length 95th (ft)	112	91	37	9	48
Internal Link Dist (ft)	1000	332	250		563
Turn Bay Length (ft)					
Base Capacity (vph)	466	371	1265	1179	1334
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.42	0.35	0.12	0.04	0.16

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	3	17	17	34	47	0	484	8	19	659	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.932			0.936			0.998				
Flt Protected		0.979			0.991						0.999	
Satd. Flow (prot)	0	1700	0	0	1728	0	0	5075	0	0	3536	0
Flt Permitted		0.815			0.934						0.935	
Satd. Flow (perm)	0	1415	0	0	1628	0	0	5075	0	0	3309	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			52			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		401			457			736			698	
Travel Time (s)		9.1			10.4			16.7			15.9	
Peak Hour Factor	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)	16	3	19	19	38	52	0	538	9	21	732	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	38	0	0	109	0	0	547	0	0	753	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.2			8.2			59.6			59.6	
Actuated g/C Ratio		0.11			0.11			0.82			0.82	
v/c Ratio		0.22			0.47			0.13			0.28	
Control Delay		20.3			23.9			2.1			2.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.3			23.9			2.1			2.7	
LOS		C			C			A			A	
Approach Delay		20.3			23.9			2.1			2.7	
Approach LOS		C			C			A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 73	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 4.5	Intersection LOS: A
Intersection Capacity Utilization 44.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 27: Delta Sonic & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	38	109	547	753
v/c Ratio	0.22	0.47	0.13	0.28
Control Delay	20.3	23.9	2.1	2.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.3	23.9	2.1	2.7
Queue Length 50th (ft)	8	24	15	35
Queue Length 95th (ft)	31	64	29	68
Internal Link Dist (ft)	321	377	656	618
Turn Bay Length (ft)				
Base Capacity (vph)	422	507	4142	2700
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.09	0.21	0.13	0.28

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	12	29	0	0	37	32	12	104	22	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.937			0.976				
Flt Protected		0.986						0.996				
Satd. Flow (prot)	0	1837	0	0	1745	0	0	3440	0	0	0	0
Flt Permitted		0.986						0.996				
Satd. Flow (perm)	0	1837	0	0	1745	0	0	3440	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		655			1107			365			316	
Travel Time (s)		14.9			25.2			8.3			7.2	
Peak Hour Factor	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)	13	32	0	0	41	36	13	116	24	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	77	0	0	153	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 19.4%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	12	29	0	0	37	32	12	104	22	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	13	32	0	0	41	36	13	116	24	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1	NB 2
Volume Total (vph)	46	77	71	82
Volume Left (vph)	13	0	13	0
Volume Right (vph)	0	36	0	24
Hadj (s)	0.09	-0.24	0.13	-0.17
Departure Headway (s)	4.4	4.1	4.9	4.6
Degree Utilization, x	0.06	0.09	0.10	0.11
Capacity (veh/h)	781	852	712	758
Control Delay (s)	7.7	7.5	7.2	6.9
Approach Delay (s)	7.7	7.5	7.1	
Approach LOS	A	A	A	

Intersection Summary			
Delay	7.3		
HCM Level of Service	A		
Intersection Capacity Utilization	19.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	16	36	437	7	22	401
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.907		0.998			
Flt Protected	0.985					0.997
Satd. Flow (prot)	1664	0	5075	0	0	3529
Flt Permitted	0.985					0.997
Satd. Flow (perm)	1664	0	5075	0	0	3529
Link Speed (mph)	30		30			30
Link Distance (ft)	655		353			338
Travel Time (s)	14.9		8.0			7.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	18	40	486	8	24	446
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	494	0	0	470
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 33.7%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	16	36	437	7	22	401
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	18	40	486	8	24	446
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			353			338
pX, platoon unblocked	0.98					
vC, conflicting volume	761	166			493	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	706	166			493	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	95			98	
cM capacity (veh/h)	353	850			1066	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	58	194	194	105	173	297
Volume Left	18	0	0	0	24	0
Volume Right	40	0	0	8	0	0
cSH	593	1700	1700	1700	1066	1700
Volume to Capacity	0.10	0.11	0.11	0.06	0.02	0.17
Queue Length 95th (ft)	8	0	0	0	2	0
Control Delay (s)	11.7	0.0	0.0	0.0	1.4	0.0
Lane LOS	B				A	
Approach Delay (s)	11.7	0.0			0.5	
Approach LOS	B					

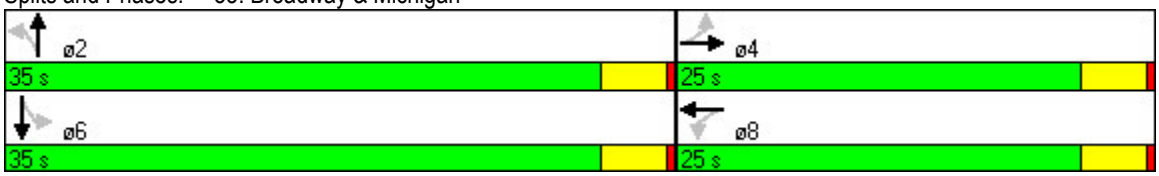
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	33.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	176	19	18	106	19	11	359	26	38	326	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.987			0.980			0.990			0.986	
Flt Protected		0.996			0.994			0.999			0.995	
Satd. Flow (prot)	0	3380	0	0	3287	0	0	3500	0	0	3405	0
Flt Permitted		0.931			0.912			0.943			0.891	
Satd. Flow (perm)	0	3159	0	0	3015	0	0	3304	0	0	3049	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			21			18			26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		260			919			684			808	
Travel Time (s)		5.9			20.9			15.5			18.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	19	196	21	20	118	21	12	399	29	42	362	41
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	236	0	0	159	0	0	440	0	0	445	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.21			0.15			0.26			0.28	
Control Delay		13.2			12.0			8.2			6.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.2			12.0			8.2			6.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		13.2			12.0			8.2			6.6	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 45.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 35: Broadway & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	236	159	440	445
v/c Ratio	0.21	0.15	0.26	0.28
Control Delay	13.2	12.0	8.2	6.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.2	12.0	8.2	6.6
Queue Length 50th (ft)	27	17	40	30
Queue Length 95th (ft)	50	35	64	45
Internal Link Dist (ft)	180	839	604	728
Turn Bay Length (ft)				
Base Capacity (vph)	1118	1069	1716	1588
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.15	0.26	0.28

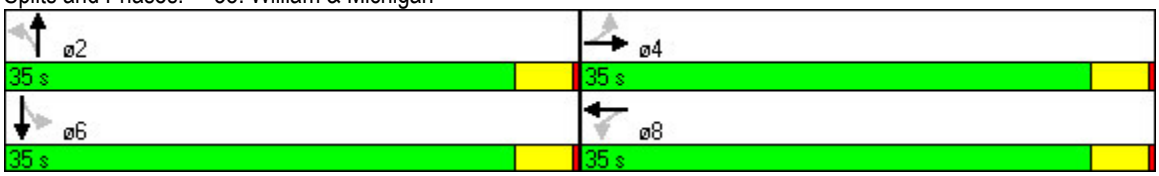
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	101	25	27	108	26	14	359	7	55	308	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.972			0.976			0.997			0.994	
Flt Protected		0.996			0.992			0.998			0.993	
Satd. Flow (prot)	0	3236	0	0	3236	0	0	3421	0	0	3394	0
Flt Permitted		0.938			0.903			0.936			0.845	
Satd. Flow (perm)	0	3048	0	0	2946	0	0	3208	0	0	2888	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			29			3			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		191			801			305			684	
Travel Time (s)		4.3			18.2			6.9			15.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	11	112	28	30	120	29	16	399	8	61	342	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	151	0	0	179	0	0	423	0	0	420	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		31.0			31.0			31.0			31.0	
Actuated g/C Ratio		0.44			0.44			0.44			0.44	
v/c Ratio		0.11			0.14			0.30			0.33	
Control Delay		9.5			10.0			13.1			13.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.5			10.0			13.1			13.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			A			B			B	
Approach Delay		9.5			10.0			13.1			13.3	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 43.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 38: William & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	151	179	423	420
v/c Ratio	0.11	0.14	0.30	0.33
Control Delay	9.5	10.0	13.1	13.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.5	10.0	13.1	13.3
Queue Length 50th (ft)	15	18	58	57
Queue Length 95th (ft)	31	36	88	89
Internal Link Dist (ft)	111	721	225	604
Turn Bay Length (ft)				
Base Capacity (vph)	1365	1321	1422	1283
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.11	0.14	0.30	0.33

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	380	38	0	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.986			
Flt Protected						
Satd. Flow (prot)	0	0	3490	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	0	3490	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	263		290			305
Travel Time (s)	6.0		6.6			6.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	422	42	0	400
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	464	0	0	400
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type						
Protected Phases			2			6
Permitted Phases						
Minimum Split (s)			20.0			20.0
Total Split (s)	0.0	0.0	20.0	0.0	0.0	20.0
Total Split (%)	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Maximum Green (s)			16.0			16.0
Yellow Time (s)			3.5			3.5
All-Red Time (s)			0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)			5.0			5.0
Flash Dont Walk (s)			11.0			11.0
Pedestrian Calls (#/hr)			0			0
Act Effct Green (s)			20.0			20.0
Actuated g/C Ratio			1.00			1.00
v/c Ratio			0.13			0.11
Control Delay			0.1			0.1
Queue Delay			0.0			0.0
Total Delay			0.1			0.1
LOS			A			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay			0.1			0.1
Approach LOS			A			A

Intersection Summary	
Area Type:	Other
Cycle Length: 20	
Actuated Cycle Length: 20	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.13	
Intersection Signal Delay: 0.1	Intersection LOS: A
Intersection Capacity Utilization 15.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 42: slip ramp & Michigan

Lane Group	NBT	SBT
Lane Group Flow (vph)	464	400
v/c Ratio	0.13	0.11
Control Delay	0.1	0.1
Queue Delay	0.0	0.0
Total Delay	0.1	0.1
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)	210	225
Turn Bay Length (ft)		
Base Capacity (vph)	3490	3539
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.13	0.11

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1	1	22	0	28	3	576	31	13	482	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.955			0.924			0.992				
Flt Protected		0.984			0.979						0.999	
Satd. Flow (prot)	0	1750	0	0	1685	0	0	5045	0	0	3468	0
Flt Permitted		0.939			0.858			0.939			0.937	
Satd. Flow (perm)	0	1670	0	0	1477	0	0	4737	0	0	3252	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			31			20				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		738			789			698			650	
Travel Time (s)		16.8			17.9			15.9			14.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	1	1	1	24	0	31	3	640	34	14	536	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	0	55	0	0	677	0	0	550	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.0			7.0			66.7			66.7	
Actuated g/C Ratio		0.09			0.09			0.88			0.88	
v/c Ratio		0.02			0.33			0.16			0.19	
Control Delay		28.0			24.2			1.5			1.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		28.0			24.2			1.5			1.7	
LOS		C			C			A			A	
Approach Delay		28.0			24.2			1.5			1.7	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.9
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.33
Intersection Signal Delay: 2.6 — Intersection LOS: A
Intersection Capacity Utilization 33.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 47: Enterprise & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	3	55	677	550
v/c Ratio	0.02	0.33	0.16	0.19
Control Delay	28.0	24.2	1.5	1.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.0	24.2	1.5	1.7
Queue Length 50th (ft)	1	12	16	21
Queue Length 95th (ft)	9	43	31	40
Internal Link Dist (ft)	658	709	618	570
Turn Bay Length (ft)				
Base Capacity (vph)	465	433	4163	2857
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.01	0.13	0.16	0.19

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	62	56	32	80	30	61	526	46	20	447	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.962			0.972			0.989			0.977	
Flt Protected		0.980			0.989			0.995			0.998	
Satd. Flow (prot)	0	1722	0	0	1660	0	0	5004	0	0	3321	0
Flt Permitted		0.754			0.884			0.838			0.921	
Satd. Flow (perm)	0	1325	0	0	1484	0	0	4215	0	0	3064	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			16			31			50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1128			954			650			1602	
Travel Time (s)		25.6			21.7			14.8			36.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	4%	4%	10%	10%	10%	2%	2%	2%	6%	6%	6%
Adj. Flow (vph)	89	69	62	36	89	33	68	584	51	22	497	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	220	0	0	158	0	0	703	0	0	611	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		15.2			15.2			52.5			52.5	
Actuated g/C Ratio		0.20			0.20			0.69			0.69	
v/c Ratio		0.77			0.51			0.24			0.29	
Control Delay		43.1			29.3			4.8			5.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		43.1			29.3			4.8			5.0	
LOS		D			C			A			A	
Approach Delay		43.1			29.3			4.8			5.0	
Approach LOS		D			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.8
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 12.1 Intersection LOS: B
Intersection Capacity Utilization 55.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 50: Utica & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	220	158	703	611
v/c Ratio	0.77	0.51	0.24	0.29
Control Delay	43.1	29.3	4.8	5.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	43.1	29.3	4.8	5.0
Queue Length 50th (ft)	85	58	35	44
Queue Length 95th (ft)	159	112	63	83
Internal Link Dist (ft)	1048	874	570	1522
Turn Bay Length (ft)				
Base Capacity (vph)	385	423	2931	2139
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.57	0.37	0.24	0.29

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	111	52	74	117	10	63	529	53	14	394	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.967			0.993			0.988			0.980	
Flt Protected		0.985			0.982			0.995			0.998	
Satd. Flow (prot)	0	3275	0	0	3259	0	0	4951	0	0	3395	0
Flt Permitted		0.795			0.763			0.857			0.932	
Satd. Flow (perm)	0	2643	0	0	2533	0	0	4264	0	0	3170	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		58			8			43			51	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			1227			1602			285	
Travel Time (s)		24.5			27.9			36.4			6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	3%	3%	3%	4%	4%	4%
Adj. Flow (vph)	81	123	58	82	130	11	70	588	59	16	438	70
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	262	0	0	223	0	0	717	0	0	524	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		9.8			9.8			36.8			36.8	
Actuated g/C Ratio		0.18			0.18			0.67			0.67	
v/c Ratio		0.50			0.48			0.25			0.24	
Control Delay		18.7			22.7			3.8			3.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		18.7			22.7			3.8			3.8	
LOS		B			C			A			A	
Approach Delay		18.7			22.7			3.8			3.8	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 54.6
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 8.5 — Intersection LOS: A
Intersection Capacity Utilization 51.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 53: Ferry & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	262	223	717	524
v/c Ratio	0.50	0.48	0.25	0.24
Control Delay	18.7	22.7	3.8	3.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.7	22.7	3.8	3.8
Queue Length 50th (ft)	30	32	23	23
Queue Length 95th (ft)	59	60	45	48
Internal Link Dist (ft)	1000	1147	1522	205
Turn Bay Length (ft)				
Base Capacity (vph)	816	748	2888	2153
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.30	0.25	0.24

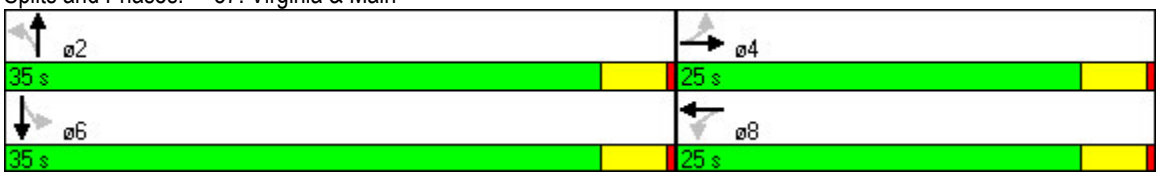
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	48	41	6	36	4	38	218	21	37	303	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.957			0.989			0.989			0.981	
Flt Protected		0.984			0.993			0.993			0.995	
Satd. Flow (prot)	0	1754	0	0	1829	0	0	4994	0	0	3455	0
Flt Permitted		0.909			0.970			0.864			0.904	
Satd. Flow (perm)	0	1620	0	0	1787	0	0	4345	0	0	3139	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		42			4			23			39	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		390			155			695			565	
Travel Time (s)		8.9			3.5			15.8			12.8	
Peak Hour Factor	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)	47	53	46	7	40	4	42	242	23	41	337	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	51	0	0	307	0	0	432	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.25			0.08			0.14			0.26	
Control Delay		11.4			12.8			7.1			7.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.4			12.8			7.1			7.8	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.4			12.8			7.1			7.8	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.26	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 40.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 57: Virginia & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	146	51	307	432
v/c Ratio	0.25	0.08	0.14	0.26
Control Delay	11.4	12.8	7.1	7.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.4	12.8	7.1	7.8
Queue Length 50th (ft)	25	11	17	37
Queue Length 95th (ft)	61	31	29	60
Internal Link Dist (ft)	310	75	615	485
Turn Bay Length (ft)				
Base Capacity (vph)	594	628	2256	1641
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.08	0.14	0.26

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	52	124	21	178	286	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.905				0.989	
Flt Protected	0.985			0.995		
Satd. Flow (prot)	1660	0	0	1853	1842	0
Flt Permitted	0.985			0.995		
Satd. Flow (perm)	1660	0	0	1853	1842	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1107			363	330	
Travel Time (s)	25.2			8.3	7.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	58	138	23	198	318	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	196	0	0	221	347	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	52	124	21	178	286	26
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	58	138	23	198	318	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				363	330	
pX, platoon unblocked						
vC, conflicting volume	577	332	347			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	577	332	347			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	81	98			
cM capacity (veh/h)	469	709	1212			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	196	221	347
Volume Left	58	23	0
Volume Right	138	0	29
cSH	616	1212	1700
Volume to Capacity	0.32	0.02	0.20
Queue Length 95th (ft)	34	1	0
Control Delay (s)	13.5	1.0	0.0
Lane LOS	B	A	
Approach Delay (s)	13.5	1.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				↑↑↑↑	↖↖	
Volume (vph)	0	0	0	767	270	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	6408	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	6408	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	339			382	585	
Travel Time (s)	7.7			8.7	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	852	300	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	852	300	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	767	270	0
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)	0	0	0	852	300	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)	339			382		
pX, platoon unblocked						
vC, conflicting volume			0		213	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		213	0
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		60	100
cM capacity (veh/h)			1622		756	1084

Direction, Lane #	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	213	213	213	213	150	150
Volume Left	0	0	0	0	150	150
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	756	756
Volume to Capacity	0.13	0.13	0.13	0.13	0.20	0.20
Queue Length 95th (ft)	0	0	0	0	18	18
Control Delay (s)	0.0	0.0	0.0	0.0	10.9	10.9
Lane LOS					B	B
Approach Delay (s)	0.0				10.9	
Approach LOS					B	

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	175	797	25	0	0	0	0	279	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.996						0.997	
Flt Protected					0.991							
Satd. Flow (prot)	0	0	0	0	6325	0	0	0	0	0	1857	0
Flt Permitted					0.991							
Satd. Flow (perm)	0	0	0	0	6325	0	0	0	0	0	1857	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					125						1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	194	886	28	0	0	0	0	310	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1108	0	0	0	0	0	317	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.4	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.5	50.5						25.6	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.2	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.4	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					51.5						26.6	
Actuated g/C Ratio					0.61						0.31	
v/c Ratio					0.29						0.54	
Control Delay					7.2						29.6	
Queue Delay					0.0						0.0	
Total Delay					7.2						29.6	
LOS					A						C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					7.2						29.6	
Approach LOS					A						C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 36.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 66: Goodell & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	1108	317
v/c Ratio	0.29	0.54
Control Delay	7.2	29.6
Queue Delay	0.0	0.0
Total Delay	7.2	29.6
Queue Length 50th (ft)	64	148
Queue Length 95th (ft)	81	231
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3881	582
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.29	0.54

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	96	36	24	134	34	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.963				0.972	
Flt Protected				0.992	0.962	
Satd. Flow (prot)	1794	0	0	1848	1742	0
Flt Permitted				0.992	0.962	
Satd. Flow (perm)	1794	0	0	1848	1742	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	293			342	645	
Travel Time (s)	6.7			7.8	14.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	107	40	27	149	38	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	0	176	48	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.0%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	96	36	24	134	34	9
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)	107	40	27	149	38	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)	293			342		
pX, platoon unblocked						
vC, conflicting volume			147		329	127
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			147		329	127
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		94	99
cM capacity (veh/h)			1435		653	924

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	147	176	48
Volume Left	0	27	38
Volume Right	40	0	10
cSH	1700	1435	696
Volume to Capacity	0.09	0.02	0.07
Queue Length 95th (ft)	0	1	6
Control Delay (s)	0.0	1.3	10.6
Lane LOS		A	B
Approach Delay (s)	0.0	1.3	10.6
Approach LOS			B

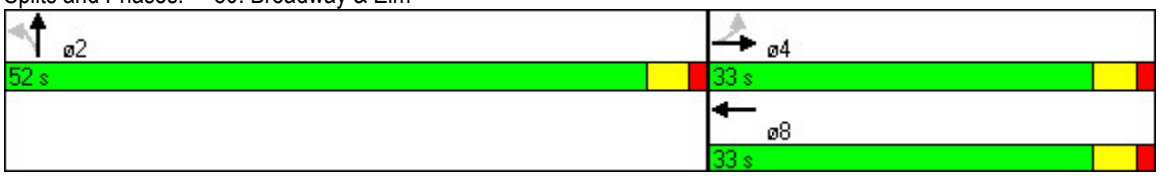
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	133	137	0	0	83	22	16	1221	33	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.969			0.996				
Flt Protected		0.976						0.999				
Satd. Flow (prot)	0	3454	0	0	3430	0	0	5060	0	0	0	0
Flt Permitted		0.761						0.999				
Satd. Flow (perm)	0	2693	0	0	3430	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					24			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			219			461			734	
Travel Time (s)		9.5			5.0			10.5			16.7	
Peak Hour Factor	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)	148	152	0	0	92	24	18	1357	37	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	300	0	0	116	0	0	1412	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	23.0	23.0			23.0		41.0	41.0				
Total Split (s)	33.0	33.0	0.0	0.0	33.0	0.0	52.0	52.0	0.0	0.0	0.0	0.0
Total Split (%)	38.8%	38.8%	0.0%	0.0%	38.8%	0.0%	61.2%	61.2%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	28.3	28.3			28.3		47.3	47.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			48.3				
Actuated g/C Ratio		0.34			0.34			0.57				
v/c Ratio		0.32			0.10			0.49				
Control Delay		8.2			15.2			4.4				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.2			15.2			4.4				
LOS		A			B			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.2			15.2			4.4				
Approach LOS		A			B			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 40 (47%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 45.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 80: Broadway & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	300	116	1412
v/c Ratio	0.32	0.10	0.49
Control Delay	8.2	15.2	4.4
Queue Delay	0.0	0.0	0.0
Total Delay	8.2	15.2	4.4
Queue Length 50th (ft)	17	17	47
Queue Length 95th (ft)	26	35	49
Internal Link Dist (ft)	339	139	381
Turn Bay Length (ft)			
Base Capacity (vph)	928	1198	2879
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.32	0.10	0.49

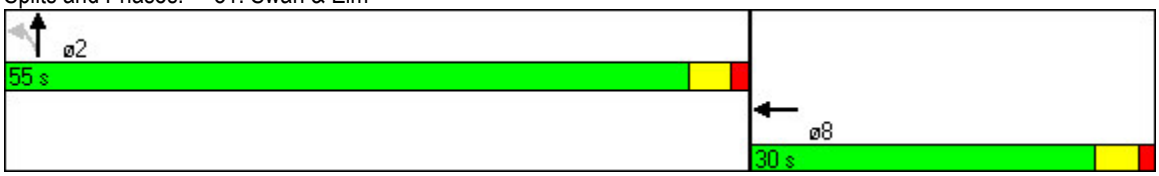
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	237	88	89	602	17	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.91	1.00	1.00	1.00
Frt					0.967			0.996				
Flt Protected							0.950	0.999				
Satd. Flow (prot)	0	0	0	0	1837	0	1552	4878	0	0	0	0
Flt Permitted							0.950	0.999				
Satd. Flow (perm)	0	0	0	0	1837	0	1552	4878	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					20		105	12				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			208			801			316	
Travel Time (s)		8.2			4.7			18.2			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.71	0.81	0.76	0.81	0.88	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	0	0	334	109	117	743	19	0	0	0
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	0	0	0	0	443	0	105	774	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					21.2		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		50.4	50.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					20		22	22				
Act Effct Green (s)					27.4		52.4	52.4				
Actuated g/C Ratio					0.32		0.62	0.62				
v/c Ratio					0.73		0.11	0.26				
Control Delay					32.8		1.7	7.6				
Queue Delay					0.0		0.0	0.0				
Total Delay					32.8		1.7	7.6				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					C		A	A				
Approach Delay					32.8			6.9				
Approach LOS					C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 66.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 81: Swan & Elm



Lane Group	WBT	NBL	NBT
Lane Group Flow (vph)	443	105	774
v/c Ratio	0.73	0.11	0.26
Control Delay	32.8	1.7	7.6
Queue Delay	0.0	0.0	0.0
Total Delay	32.8	1.7	7.6
Queue Length 50th (ft)	199	0	64
Queue Length 95th (ft)	218	12	74
Internal Link Dist (ft)	128		721
Turn Bay Length (ft)			
Base Capacity (vph)	606	997	3012
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.73	0.11	0.26

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	229	8	77	118	0	0	0	0	49	1707	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.995									0.992	
Flt Protected					0.981						0.999	
Satd. Flow (prot)	0	3522	0	0	3472	0	0	0	0	0	5040	0
Flt Permitted					0.754						0.999	
Satd. Flow (perm)	0	3522	0	0	2669	0	0	0	0	0	5040	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4									18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			419			255			685	
Travel Time (s)		5.1			9.5			5.8			15.6	
Peak Hour Factor	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)	0	254	9	86	131	0	0	0	0	54	1897	109
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	263	0	0	217	0	0	0	0	0	2060	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		24.0		24.0	24.0					41.0	41.0	
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%
Maximum Green (s)		25.3		25.3	25.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		26.3			26.3						51.3	
Actuated g/C Ratio		0.31			0.31						0.60	
v/c Ratio		0.24			0.26						0.68	
Control Delay		22.3			19.0						5.3	
Queue Delay		0.0			0.0						0.0	
Total Delay		22.3			19.0						5.3	
LOS		C			B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.3			19.0						5.3	
Approach LOS		C			B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 33 (39%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 58.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 82: Broadway & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	263	217	2060
v/c Ratio	0.24	0.26	0.68
Control Delay	22.3	19.0	5.3
Queue Delay	0.0	0.0	0.0
Total Delay	22.3	19.0	5.3
Queue Length 50th (ft)	53	35	45
Queue Length 95th (ft)	84	54	50
Internal Link Dist (ft)	146	339	605
Turn Bay Length (ft)			
Base Capacity (vph)	1093	826	3049
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.24	0.26	0.68

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	402	186	155	0	0	0	0	0	2114	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.86	0.86
Frt			0.850								0.992	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			13	7							25	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			359			115			332	
Travel Time (s)		8.0			8.2			2.6			7.5	
Peak Hour Factor	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)	0	0	447	207	172	0	0	0	0	0	2349	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	447	207	172	0	0	0	0	0	2473	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			custom	Perm								
Protected Phases					8						6	
Permitted Phases			4	8								
Minimum Split (s)			20.8	20.8	20.8						50.0	
Total Split (s)	0.0	0.0	26.0	26.0	26.0	0.0	0.0	0.0	0.0	0.0	59.0	0.0
Total Split (%)	0.0%	0.0%	30.6%	30.6%	30.6%	0.0%	0.0%	0.0%	0.0%	0.0%	69.4%	0.0%
Maximum Green (s)			21.2	21.2	21.2						54.2	
Yellow Time (s)			3.2	3.2	3.2						3.2	
All-Red Time (s)			1.6	1.6	1.6						1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.8	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)			5.0	5.0	5.0						5.0	
Flash Dont Walk (s)			11.0	11.0	11.0						11.0	
Pedestrian Calls (#/hr)			0	0	0						0	
Act Effct Green (s)			22.2	22.2	22.2						55.2	
Actuated g/C Ratio			0.26	0.26	0.26						0.65	
v/c Ratio			0.61	0.44	0.19						0.60	
Control Delay			30.8	34.9	32.2						3.6	
Queue Delay			0.0	0.0	0.0						0.0	
Total Delay			30.8	34.9	32.2						3.6	
LOS			C	C	C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					33.7						3.6	
Approach LOS					C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 75 (88%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 10.8	Intersection LOS: B
Intersection Capacity Utilization 66.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 83: Swan & Oak

Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	447	207	172	2473
v/c Ratio	0.61	0.44	0.19	0.60
Control Delay	30.8	34.9	32.2	3.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.8	34.9	32.2	3.6
Queue Length 50th (ft)	115	75	33	69
Queue Length 95th (ft)	169	m127	m55	74
Internal Link Dist (ft)			279	252
Turn Bay Length (ft)				
Base Capacity (vph)	738	467	924	4137
Starvation Cap Reductn	0	0	0	137
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.44	0.19	0.62

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	110	145	57	67	0	0	0	0	13	1652	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.923									0.998	
Flt Protected					0.978							
Satd. Flow (prot)	0	1719	0	0	1822	0	0	0	0	0	5075	0
Flt Permitted					0.699							
Satd. Flow (perm)	0	1719	0	0	1302	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17									4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			458			685			413	
Travel Time (s)		10.0			10.4			15.6			9.4	
Peak Hour Factor	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)	0	122	161	63	74	0	0	0	0	14	1836	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	0	0	137	0	0	0	0	0	1876	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%
Maximum Green (s)		25.3		25.3	25.3					50.0	50.0	
Yellow Time (s)		3.2		3.2	3.2					3.5	3.5	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	4.0	4.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		26.3			26.3						51.0	
Actuated g/C Ratio		0.31			0.31						0.60	
v/c Ratio		0.52			0.34						0.62	
Control Delay		26.7			22.0						4.1	
Queue Delay		0.0			0.0						0.0	
Total Delay		26.7			22.0						4.1	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		26.7			22.0						4.1	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 18 (21%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 8.0	Intersection LOS: A
Intersection Capacity Utilization 64.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 84: Huron & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	283	137	1876
v/c Ratio	0.52	0.34	0.62
Control Delay	26.7	22.0	4.1
Queue Delay	0.0	0.0	0.0
Total Delay	26.7	22.0	4.1
Queue Length 50th (ft)	116	53	31
Queue Length 95th (ft)	192	102	34
Internal Link Dist (ft)	360	378	333
Turn Bay Length (ft)			
Base Capacity (vph)	544	403	3047
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.52	0.34	0.62

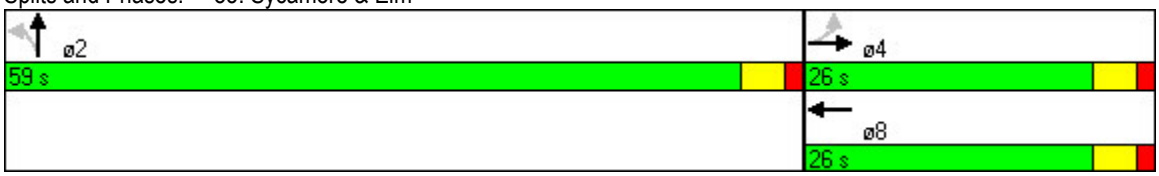
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	55	0	0	50	13	32	1321	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.973			0.997				
Flt Protected		0.969						0.999				
Satd. Flow (prot)	0	1805	0	0	1812	0	0	5065	0	0	0	0
Flt Permitted		0.768						0.999				
Satd. Flow (perm)	0	1431	0	0	1812	0	0	5065	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					14			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		458			245			734			310	
Travel Time (s)		10.4			5.6			16.7			7.0	
Peak Hour Factor	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)	113	61	0	0	56	14	36	1468	26	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	0	0	70	0	0	1530	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.7	20.7			20.7		45.0	45.0				
Total Split (s)	26.0	26.0	0.0	0.0	26.0	0.0	59.0	59.0	0.0	0.0	0.0	0.0
Total Split (%)	30.6%	30.6%	0.0%	0.0%	30.6%	0.0%	69.4%	69.4%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	21.3	21.3			21.3		54.3	54.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		22.3			22.3			55.3				
Actuated g/C Ratio		0.26			0.26			0.65				
v/c Ratio		0.46			0.14			0.46				
Control Delay		39.1			21.1			5.6				
Queue Delay		0.0			0.0			0.0				
Total Delay		39.1			21.1			5.6				
LOS		D			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		39.1			21.1			5.6				
Approach LOS		D			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 68 (80%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 48.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 85: Sycamore & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	174	70	1530
v/c Ratio	0.46	0.14	0.46
Control Delay	39.1	21.1	5.6
Queue Delay	0.0	0.0	0.0
Total Delay	39.1	21.1	5.6
Queue Length 50th (ft)	94	23	76
Queue Length 95th (ft)	m159	55	97
Internal Link Dist (ft)	378	165	654
Turn Bay Length (ft)			
Base Capacity (vph)	375	486	3297
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.46	0.14	0.46

Intersection Summary

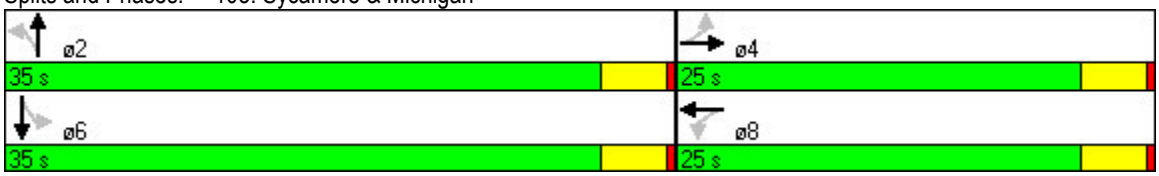
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	59	9	13	50	23	7	391	17	15	347	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.984			0.963			0.994			0.996	
Flt Protected		0.995			0.993			0.999			0.998	
Satd. Flow (prot)	0	1661	0	0	1652	0	0	3514	0	0	3450	0
Flt Permitted		0.981			0.967			0.949			0.934	
Satd. Flow (perm)	0	1638	0	0	1608	0	0	3339	0	0	3229	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			26			11			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		240			667			808			873	
Travel Time (s)		5.5			15.2			18.4			19.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	12%	12%	12%	10%	10%	10%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	8	66	10	14	56	26	8	434	19	17	386	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	96	0	0	461	0	0	415	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.14			0.17			0.27			0.25	
Control Delay		12.9			11.4			6.8			8.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.9			11.4			6.8			8.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		12.9			11.4			6.8			8.4	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.27	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 35.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: Sycamore & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	84	96	461	415
v/c Ratio	0.14	0.17	0.27	0.25
Control Delay	12.9	11.4	6.8	8.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.9	11.4	6.8	8.4
Queue Length 50th (ft)	18	17	34	39
Queue Length 95th (ft)	44	44	50	62
Internal Link Dist (ft)	160	587	728	793
Turn Bay Length (ft)				
Base Capacity (vph)	580	580	1730	1672
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.14	0.17	0.27	0.25

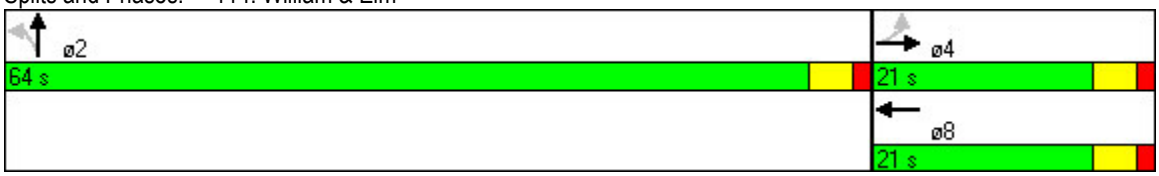
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	182	0	0	80	24	24	1270	16	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.965			0.998				
Flt Protected		0.993						0.999				
Satd. Flow (prot)	0	3514	0	0	3415	0	0	5070	0	0	0	0
Flt Permitted		0.900						0.999				
Satd. Flow (perm)	0	3185	0	0	3415	0	0	5070	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					27			5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		371			191			308			461	
Travel Time (s)		8.4			4.3			7.0			10.5	
Peak Hour Factor	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)	34	202	0	0	89	27	27	1411	18	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	236	0	0	116	0	0	1456	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	21.0	21.0	0.0	0.0	21.0	0.0	64.0	64.0	0.0	0.0	0.0	0.0
Total Split (%)	24.7%	24.7%	0.0%	0.0%	24.7%	0.0%	75.3%	75.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.3	16.3			16.3		59.3	59.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.3			17.3			60.3				
Actuated g/C Ratio		0.20			0.20			0.71				
v/c Ratio		0.36			0.16			0.40				
Control Delay		28.7			22.0			3.6				
Queue Delay		0.0			0.0			0.1				
Total Delay		28.7			22.0			3.7				
LOS		C			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		28.7			22.0			3.7				
Approach LOS		C			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 39 (46%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 41.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 114: William & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	236	116	1456
v/c Ratio	0.36	0.16	0.40
Control Delay	28.7	22.0	3.6
Queue Delay	0.0	0.0	0.1
Total Delay	28.7	22.0	3.7
Queue Length 50th (ft)	50	20	28
Queue Length 95th (ft)	76	43	38
Internal Link Dist (ft)	291	111	228
Turn Bay Length (ft)			
Base Capacity (vph)	648	717	3598
Starvation Cap Reductn	0	0	908
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.36	0.16	0.54

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	53	44	74	108	0	0	0	0	45	1760	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.932									0.999	
Flt Protected					0.980						0.999	
Satd. Flow (prot)	0	3299	0	0	3468	0	0	0	0	0	5075	0
Flt Permitted					0.802						0.999	
Satd. Flow (perm)	0	3299	0	0	2838	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		507			371			297			255	
Travel Time (s)		11.5			8.4			6.8			5.8	
Peak Hour Factor	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)	0	59	49	82	120	0	0	0	0	50	1956	9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	202	0	0	0	0	0	2015	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	26.0	0.0	26.0	26.0	0.0	0.0	0.0	0.0	59.0	59.0	0.0
Total Split (%)	0.0%	30.6%	0.0%	30.6%	30.6%	0.0%	0.0%	0.0%	0.0%	69.4%	69.4%	0.0%
Maximum Green (s)		21.3		21.3	21.3					54.3	54.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		22.3			22.3						55.3	
Actuated g/C Ratio		0.26			0.26						0.65	
v/c Ratio		0.12			0.27						0.61	
Control Delay		20.3			21.1						1.7	
Queue Delay		0.0			0.0						0.1	
Total Delay		20.3			21.1						1.8	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		20.3			21.1						1.8	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 37 (44%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 4.4	Intersection LOS: A
Intersection Capacity Utilization 52.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 115: William & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	108	202	2015
v/c Ratio	0.12	0.27	0.61
Control Delay	20.3	21.1	1.7
Queue Delay	0.0	0.0	0.1
Total Delay	20.3	21.1	1.8
Queue Length 50th (ft)	18	33	21
Queue Length 95th (ft)	39	52	23
Internal Link Dist (ft)	427	291	175
Turn Bay Length (ft)			
Base Capacity (vph)	879	745	3302
Starvation Cap Reductn	0	0	307
Spillback Cap Reductn	0	0	243
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.12	0.27	0.67

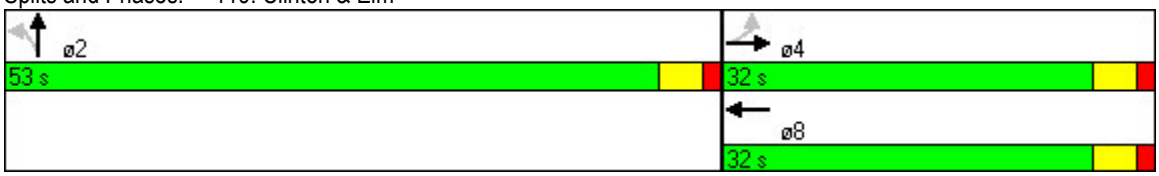
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	138	129	0	0	40	21	17	1160	11	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.944			0.998				
Flt Protected		0.973						0.999				
Satd. Flow (prot)	0	1824	0	0	1794	0	0	5026	0	0	0	0
Flt Permitted		0.768						0.999				
Satd. Flow (perm)	0	1440	0	0	1794	0	0	5026	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					39			4				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			191			734			308	
Travel Time (s)		8.2			4.3			16.7			7.0	
Peak Hour Factor	0.68	0.78	0.90	0.90	0.73	0.54	0.58	0.94	0.58	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	2%	2%	0%	0%	0%	3%	0%	2%	2%	2%
Adj. Flow (vph)	203	165	0	0	55	39	29	1234	19	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	368	0	0	94	0	0	1282	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	32.0	32.0	0.0	0.0	32.0	0.0	53.0	53.0	0.0	0.0	0.0	0.0
Total Split (%)	37.6%	37.6%	0.0%	0.0%	37.6%	0.0%	62.4%	62.4%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	27.3	27.3			27.3		48.3	48.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.7	2.7	3.0	3.0	2.7	3.0	2.7	2.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			50.3				
Actuated g/C Ratio		0.34			0.34			0.59				
v/c Ratio		0.74			0.15			0.43				
Control Delay		43.3			12.9			5.2				
Queue Delay		0.2			0.0			0.0				
Total Delay		43.5			12.9			5.2				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D			B			A				
Approach Delay		43.5			12.9			5.2				
Approach LOS		D			B			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 31 (36%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 50.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 119: Clinton & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	368	94	1282
v/c Ratio	0.74	0.15	0.43
Control Delay	43.3	12.9	5.2
Queue Delay	0.2	0.0	0.0
Total Delay	43.5	12.9	5.2
Queue Length 50th (ft)	168	20	15
Queue Length 95th (ft)	223	39	20
Internal Link Dist (ft)	279	111	654
Turn Bay Length (ft)			
Base Capacity (vph)	496	644	2976
Starvation Cap Reductn	7	0	0
Spillback Cap Reductn	0	0	57
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.75	0.15	0.44

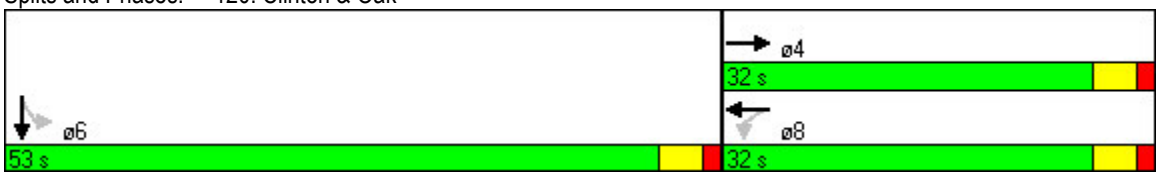
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	205	174	24	39	0	0	0	0	39	1820	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.938									0.999	
Flt Protected					0.981						0.999	
Satd. Flow (prot)	0	1747	0	0	1827	0	0	0	0	0	5075	0
Flt Permitted					0.736						0.999	
Satd. Flow (perm)	0	1747	0	0	1371	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		520			359			762			297	
Travel Time (s)		11.8			8.2			17.3			6.8	
Peak Hour Factor	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)	0	228	193	27	43	0	0	0	0	43	2022	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	421	0	0	70	0	0	0	0	0	2078	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					48.0	48.0	
Total Split (s)	0.0	32.0	0.0	32.0	32.0	0.0	0.0	0.0	0.0	53.0	53.0	0.0
Total Split (%)	0.0%	37.6%	0.0%	37.6%	37.6%	0.0%	0.0%	0.0%	0.0%	62.4%	62.4%	0.0%
Maximum Green (s)		27.3		27.3	27.3					48.3	48.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		28.3			28.3						49.3	
Actuated g/C Ratio		0.33			0.33						0.58	
v/c Ratio		0.72			0.15						0.71	
Control Delay		32.4			21.2						5.6	
Queue Delay		0.4			0.0						0.0	
Total Delay		32.8			21.2						5.7	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		32.8			21.2						5.7	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 47 (55%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 10.5	Intersection LOS: B
Intersection Capacity Utilization 66.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 120: Clinton & Oak



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	421	70	2078
v/c Ratio	0.72	0.15	0.71
Control Delay	32.4	21.2	5.6
Queue Delay	0.4	0.0	0.0
Total Delay	32.8	21.2	5.7
Queue Length 50th (ft)	191	30	28
Queue Length 95th (ft)	298	66	32
Internal Link Dist (ft)	440	279	217
Turn Bay Length (ft)			
Base Capacity (vph)	588	456	2944
Starvation Cap Reductn	0	0	65
Spillback Cap Reductn	20	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.74	0.15	0.72

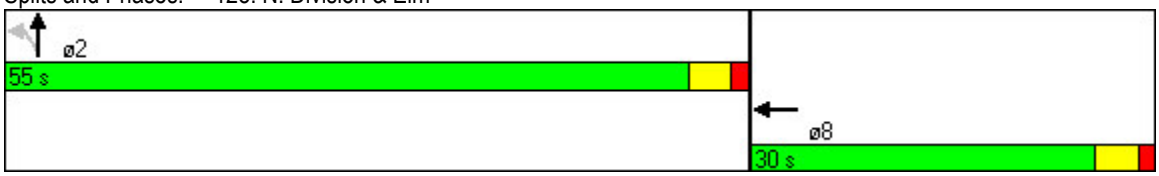
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	67	76	128	1075	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.920							
Flt Protected								0.995				
Satd. Flow (prot)	0	0	0	0	3256	0	0	5060	0	0	0	0
Flt Permitted								0.995				
Satd. Flow (perm)	0	0	0	0	3256	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					79			44				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		349			195			317			734	
Travel Time (s)		7.9			4.4			7.2			16.7	
Peak Hour Factor	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)	0	0	0	0	74	84	142	1194	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	158	0	0	1336	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					20.6		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		50.4	50.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					26.4			51.4				
Actuated g/C Ratio					0.31			0.60				
v/c Ratio					0.15			0.43				
Control Delay					11.5			12.2				
Queue Delay					0.0			0.2				
Total Delay					11.5			12.5				
LOS					B			B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					11.5			12.5				
Approach LOS					B			B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 10 (12%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 12.4	Intersection LOS: B
Intersection Capacity Utilization 34.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 128: N. Division & Elm



Lane Group	WBT	NBT
Lane Group Flow (vph)	158	1336
v/c Ratio	0.15	0.43
Control Delay	11.5	12.2
Queue Delay	0.0	0.2
Total Delay	11.5	12.5
Queue Length 50th (ft)	15	104
Queue Length 95th (ft)	37	242
Internal Link Dist (ft)	115	237
Turn Bay Length (ft)		
Base Capacity (vph)	1066	3077
Starvation Cap Reductn	0	852
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.15	0.60

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	62	72	0	0	0	0	0	1875	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.998	
Flt Protected					0.977							
Satd. Flow (prot)	0	0	0	0	4968	0	0	0	0	0	5075	0
Flt Permitted					0.977							
Satd. Flow (perm)	0	0	0	0	4968	0	0	0	0	0	5075	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					7						3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			349			277			762	
Travel Time (s)		8.2			7.9			6.3			17.3	
Peak Hour Factor	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)	0	0	0	69	80	0	0	0	0	0	2083	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	149	0	0	0	0	0	2107	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.7	20.7						50.0	
Total Split (s)	0.0	0.0	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	52.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	38.8%	38.8%	0.0%	0.0%	0.0%	0.0%	0.0%	61.2%	0.0%
Maximum Green (s)				28.3	28.3						47.3	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.5	1.5						1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					29.3						48.3	
Actuated g/C Ratio					0.34						0.57	
v/c Ratio					0.09						0.73	
Control Delay					15.5						6.5	
Queue Delay					0.0						0.0	
Total Delay					15.5						6.5	
LOS					B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					15.5						6.5	
Approach LOS					B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 66 (78%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 46.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 129: N. Division & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	149	2107
v/c Ratio	0.09	0.73
Control Delay	15.5	6.5
Queue Delay	0.0	0.0
Total Delay	15.5	6.5
Queue Length 50th (ft)	19	43
Queue Length 95th (ft)	32	49
Internal Link Dist (ft)	269	682
Turn Bay Length (ft)		
Base Capacity (vph)	1717	2885
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.09	0.73

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	520	159	0	0	0	0	0	721	11	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.998				
Flt Protected	0.950	0.970										
Satd. Flow (prot)	1610	3288	0	0	0	0	0	5075	0	0	0	0
Flt Permitted	0.950	0.970										
Satd. Flow (perm)	1610	3288	0	0	0	0	0	5075	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	186	186						4				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			206			316			317	
Travel Time (s)		7.8			4.7			7.2			7.2	
Peak Hour Factor	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)	578	177	0	0	0	0	0	801	12	0	0	0
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	289	466	0	0	0	0	0	813	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	21.0	21.0						50.0				
Total Split (s)	31.0	31.0	0.0	0.0	0.0	0.0	0.0	54.0	0.0	0.0	0.0	0.0
Total Split (%)	36.5%	36.5%	0.0%	0.0%	0.0%	0.0%	0.0%	63.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	26.4	26.4						49.4				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	1.4	1.4						1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	27.4	27.4						50.4				
Actuated g/C Ratio	0.32	0.32						0.59				
v/c Ratio	0.45	0.39						0.27				
Control Delay	9.6	7.7						4.0				
Queue Delay	0.6	0.0						0.1				
Total Delay	10.2	7.7						4.1				
LOS	B	A						A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.7						4.1				
Approach LOS		A						A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 5 (6%), Referenced to phase 2:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 80.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 135: S Division & Elm

Lane Group	EBL	EBT	NBT
Lane Group Flow (vph)	289	466	813
v/c Ratio	0.45	0.39	0.27
Control Delay	9.6	7.7	4.0
Queue Delay	0.6	0.0	0.1
Total Delay	10.2	7.7	4.1
Queue Length 50th (ft)	124	101	28
Queue Length 95th (ft)	207	146	34
Internal Link Dist (ft)		265	236
Turn Bay Length (ft)			
Base Capacity (vph)	645	1186	3011
Starvation Cap Reductn	129	0	1019
Spillback Cap Reductn	5	2	143
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.56	0.39	0.41

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	591	377	0	0	0	0	0	0	88	1849	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									
Flt Protected											0.998	
Satd. Flow (prot)	0	5085	1583	0	0	0	0	0	0	0	6395	0
Flt Permitted											0.998	
Satd. Flow (perm)	0	5085	1583	0	0	0	0	0	0	0	6395	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			9								19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		208			345			332			277	
Travel Time (s)		4.7			7.8			7.5			6.3	
Peak Hour Factor	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)	0	657	419	0	0	0	0	0	0	98	2054	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	657	419	0	0	0	0	0	0	0	2152	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		20.8	20.8							50.0	50.0	
Total Split (s)	0.0	31.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	54.0	54.0	0.0
Total Split (%)	0.0%	36.5%	36.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	63.5%	63.5%	0.0%
Maximum Green (s)		26.2	26.2							49.2	49.2	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.6	1.6							1.6	1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.0	3.8	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		27.2	27.2								50.2	
Actuated g/C Ratio		0.32	0.32								0.59	
v/c Ratio		0.40	0.82								0.57	
Control Delay		23.5	41.0								1.3	
Queue Delay		0.0	0.0								0.2	
Total Delay		23.5	41.0								1.5	
LOS		C	D								A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		30.3									1.5	
Approach LOS		C									A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 72 (85%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 58.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 136: S Division & Oak

Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	657	419	2152
v/c Ratio	0.40	0.82	0.57
Control Delay	23.5	41.0	1.3
Queue Delay	0.0	0.0	0.2
Total Delay	23.5	41.0	1.5
Queue Length 50th (ft)	99	200	10
Queue Length 95th (ft)	132	#356	11
Internal Link Dist (ft)	128		197
Turn Bay Length (ft)			
Base Capacity (vph)	1627	513	3785
Starvation Cap Reductn	0	0	654
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.40	0.82	0.69

Intersection Summary

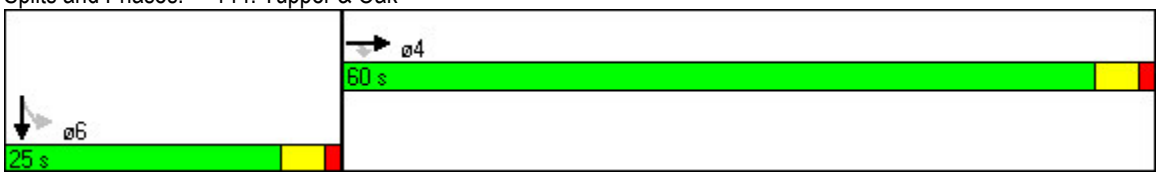
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1430	243	0	0	0	0	0	0	161	274	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									
Flt Protected											0.982	
Satd. Flow (prot)	0	3539	1583	0	0	0	0	0	0	0	3476	0
Flt Permitted											0.982	
Satd. Flow (perm)	0	3539	1583	0	0	0	0	0	0	0	3476	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			225								44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		351			380			611			685	
Travel Time (s)		8.0			8.6			13.9			15.6	
Peak Hour Factor	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)	0	1589	270	0	0	0	0	0	0	179	304	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1589	270	0	0	0	0	0	0	0	483	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		45.0	45.0							20.6	20.6	
Total Split (s)	0.0	60.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0
Total Split (%)	0.0%	70.6%	70.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.4%	29.4%	0.0%
Maximum Green (s)		55.4	55.4							20.4	20.4	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.4	1.4							1.4	1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		56.4	56.4								21.4	
Actuated g/C Ratio		0.66	0.66								0.25	
v/c Ratio		0.68	0.24								0.53	
Control Delay		9.1	0.8								18.0	
Queue Delay		0.3	0.3								0.0	
Total Delay		9.4	1.1								18.0	
LOS		A	A								B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.2									18.0	
Approach LOS		A									B	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 58.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 144: Tupper & Oak



Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	1589	270	483
v/c Ratio	0.68	0.24	0.53
Control Delay	9.1	0.8	18.0
Queue Delay	0.3	0.3	0.0
Total Delay	9.4	1.1	18.0
Queue Length 50th (ft)	321	1	53
Queue Length 95th (ft)	426	2	91
Internal Link Dist (ft)	271		605
Turn Bay Length (ft)			
Base Capacity (vph)	2348	1126	908
Starvation Cap Reductn	224	386	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.75	0.36	0.53

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	1211	10	0	0	0	0	135	184	46	27	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor		1.00										
Frt		0.998						0.952	0.850			
Flt Protected		0.999									0.973	
Satd. Flow (prot)	0	5156	0	0	0	0	0	1674	1504	0	2872	0
Flt Permitted		0.999									0.741	
Satd. Flow (perm)	0	5155	0	0	0	0	0	1674	1504	0	2187	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4						29	47			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	30	1442	20	0	0	0	0	153	275	67	54	0
Shared Lane Traffic (%)									26%			
Lane Group Flow (vph)	0	1492	0	0	0	0	0	225	203	0	121	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	35.3%	35.3%	35.3%	0.0%
Maximum Green (s)	50.4	50.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		52.4						27.4	27.4		27.4	
Actuated g/C Ratio		0.62						0.32	0.32		0.32	
v/c Ratio		0.47						0.40	0.39		0.17	
Control Delay		5.6						22.0	19.6		20.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.1						0.0	0.0		0.0	
Total Delay		5.7						22.0	19.7		20.6	
LOS		A						C	B		C	
Approach Delay		5.7						20.9			20.6	
Approach LOS		A						C			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 38 (45%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 48.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 145: Tupper & Ellicott

Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	1492	225	203	121
v/c Ratio	0.47	0.40	0.39	0.17
Control Delay	5.6	22.0	19.6	20.6
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	5.7	22.0	19.7	20.6
Queue Length 50th (ft)	56	84	66	25
Queue Length 95th (ft)	64	145	84	24
Internal Link Dist (ft)	262	271		652
Turn Bay Length (ft)				
Base Capacity (vph)	3179	559	517	705
Starvation Cap Reductn	482	0	0	0
Spillback Cap Reductn	440	2	4	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.55	0.40	0.40	0.17

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1128	69	0	0	0	0	125	82	178	171	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989							0.850			
Flt Protected		0.999								0.950		
Satd. Flow (prot)	0	5079	0	0	0	0	0	1900	1615	1787	1863	0
Flt Permitted		0.999								0.589		
Satd. Flow (perm)	0	5079	0	0	0	0	0	1900	1615	1108	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28							73			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			342			356			718	
Travel Time (s)		6.5			7.8			8.1			16.3	
Peak Hour Factor	0.50	0.90	0.67	0.90	0.90	0.90	0.90	0.80	0.94	0.76	0.73	0.90
Heavy Vehicles (%)	0%	1%	0%	2%	2%	2%	2%	0%	0%	1%	2%	2%
Adj. Flow (vph)	18	1253	103	0	0	0	0	156	87	234	234	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1374	0	0	0	0	0	156	87	234	234	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	35.3%	35.3%	35.3%	0.0%
Maximum Green (s)	50.4	50.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	3.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		52.4						27.4	26.4	27.4	27.4	
Actuated g/C Ratio		0.62						0.32	0.31	0.32	0.32	
v/c Ratio		0.44						0.25	0.16	0.66	0.39	
Control Delay		0.5						22.7	8.0	49.1	38.4	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		0.5						22.7	8.0	49.1	38.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A						C	A	D	D	
Approach Delay		0.5						17.4			43.8	
Approach LOS		A						B			D	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 31 (36%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 50.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 146: Tupper & Washington

Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1374	156	87	234	234
v/c Ratio	0.44	0.25	0.16	0.66	0.39
Control Delay	0.5	22.7	8.0	49.1	38.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.5	22.7	8.0	49.1	38.4
Queue Length 50th (ft)	0	61	5	127	122
Queue Length 95th (ft)	0	95	37	169	154
Internal Link Dist (ft)	208	276			638
Turn Bay Length (ft)					
Base Capacity (vph)	3142	612	552	357	601
Starvation Cap Reductn	310	0	0	0	0
Spillback Cap Reductn	2	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.25	0.16	0.66	0.39

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	1129	0	0	0	0	0	196	16	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.989				
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3500	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3500	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1						10				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		380			319			560			585	
Travel Time (s)		8.6			7.3			12.7			13.3	
Peak Hour Factor	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)	7	1254	0	0	0	0	0	218	18	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1261	0	0	0	0	0	236	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	45.0	45.0						21.2				
Total Split (s)	59.0	59.0	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.0	0.0	0.0
Total Split (%)	69.4%	69.4%	0.0%	0.0%	0.0%	0.0%	0.0%	30.6%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	53.8	53.8						20.8				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	2.0	2.0						2.0				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.2	4.2	3.0	3.0	3.0	3.0	3.0	4.2	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		54.8						21.8				
Actuated g/C Ratio		0.64						0.26				
v/c Ratio		0.55						0.26				
Control Delay		4.4						16.9				
Queue Delay		0.2						0.0				
Total Delay		4.6						16.9				
LOS		A						B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		4.6						16.9				
Approach LOS		A						B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 6.6	Intersection LOS: A
Intersection Capacity Utilization 44.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 152: Tupper & Elm St

Lane Group	EBT	NBT
Lane Group Flow (vph)	1261	236
v/c Ratio	0.55	0.26
Control Delay	4.4	16.9
Queue Delay	0.2	0.0
Total Delay	4.6	16.9
Queue Length 50th (ft)	75	21
Queue Length 95th (ft)	72	45
Internal Link Dist (ft)	300	480
Turn Bay Length (ft)		
Base Capacity (vph)	2282	905
Starvation Cap Reductn	352	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.65	0.26

Intersection Summary

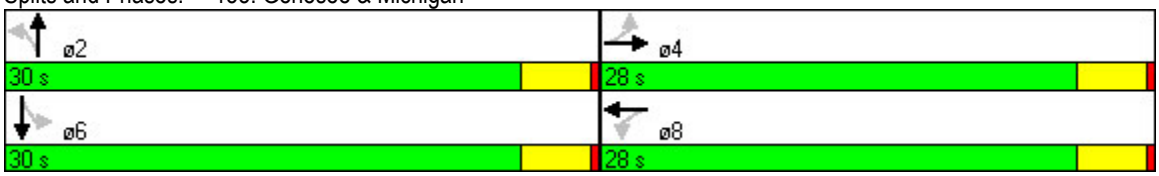
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	127	17	8	97	26	10	294	29	50	310	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.985			0.973			0.987			0.990	
Flt Protected		0.992			0.997			0.999			0.994	
Satd. Flow (prot)	0	3458	0	0	1807	0	0	3490	0	0	3483	0
Flt Permitted		0.905			0.984			0.943			0.874	
Satd. Flow (perm)	0	3155	0	0	1783	0	0	3294	0	0	3062	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			27			23			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			1157			873			441	
Travel Time (s)		11.8			26.3			19.8			10.0	
Peak Hour Factor	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)	33	141	19	9	108	29	11	327	32	56	344	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	193	0	0	146	0	0	370	0	0	430	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	48.3%	48.3%	0.0%	48.3%	48.3%	0.0%	51.7%	51.7%	0.0%	51.7%	51.7%	0.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		25.0			25.0			27.0			27.0	
Actuated g/C Ratio		0.43			0.43			0.47			0.47	
v/c Ratio		0.14			0.19			0.24			0.30	
Control Delay		9.3			9.1			9.2			9.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.3			9.1			9.2			9.9	
LOS		A			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.3			9.1			9.2			9.9	
Approach LOS		A			A			A			A	

Intersection Summary

Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.30	
Intersection Signal Delay: 9.5	Intersection LOS: A
Intersection Capacity Utilization 43.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 155: Genesee & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	193	146	370	430
v/c Ratio	0.14	0.19	0.24	0.30
Control Delay	9.3	9.1	9.2	9.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.3	9.1	9.2	9.9
Queue Length 50th (ft)	17	24	35	43
Queue Length 95th (ft)	34	54	58	70
Internal Link Dist (ft)	438	1077	793	361
Turn Bay Length (ft)				
Base Capacity (vph)	1371	784	1546	1435
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.14	0.19	0.24	0.30

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	150	475	99	17	4	42	269	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	
Flt Protected		0.988				0.982		
Satd. Flow (prot)	0	5049	1538	0	0	1745	2732	0
Flt Permitted		0.988				0.982		
Satd. Flow (perm)	0	5049	1538	0	0	1745	2732	0
Right Turn on Red								Yes
Satd. Flow (RTOR)							48	
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	185	546	108	24	6	51	299	106
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	731	108	0	0	81	405	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	
Total Split (s)	60.0	60.0	60.0	25.0	25.0	25.0	25.0	0.0
Total Split (%)	70.6%	70.6%	70.6%	29.4%	29.4%	29.4%	29.4%	0.0%
Maximum Green (s)	55.4	55.4	55.4	20.4	20.4	20.4	20.4	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	3.5
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	
Act Effct Green (s)		55.4	55.4			20.9	20.9	
Actuated g/C Ratio		0.65	0.65			0.25	0.25	
v/c Ratio		0.22	0.11			0.19	0.57	
Control Delay		9.4	8.8			16.9	28.3	
Queue Delay		0.4	0.0			0.0	0.0	
Total Delay		9.8	8.8			16.9	28.3	

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		A	A			B	C	
Approach Delay		9.7				16.9		
Approach LOS		A				B		

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 8 (9%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 38.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 159: Pearl & Main

Lane Group	WBT	WBR	NBT	SBR
Lane Group Flow (vph)	731	108	81	405
v/c Ratio	0.22	0.11	0.19	0.57
Control Delay	9.4	8.8	16.9	28.3
Queue Delay	0.4	0.0	0.0	0.0
Total Delay	9.8	8.8	16.9	28.3
Queue Length 50th (ft)	68	26	34	94
Queue Length 95th (ft)	m81	m46	64	145
Internal Link Dist (ft)	206		625	
Turn Bay Length (ft)				
Base Capacity (vph)	3291	1002	429	708
Starvation Cap Reductn	1945	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.54	0.11	0.19	0.57

Intersection Summary

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

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	82	1247	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.997				
Satd. Flow (prot)	0	5070	0	0	1863	0
Flt Permitted		0.997				
Satd. Flow (perm)	0	5070	0	0	1863	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		161	288		705	
Travel Time (s)		3.7	6.5		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	91	1386	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1477	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm					
Protected Phases		4			6	
Permitted Phases	4					
Minimum Split (s)	40.0	40.0			20.6	
Total Split (s)	55.0	55.0	0.0	0.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)	50.4	50.4			25.4	
Yellow Time (s)	3.2	3.2			3.2	
All-Red Time (s)	1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.6	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0	
Act Effct Green (s)		51.4				
Actuated g/C Ratio		0.60				
v/c Ratio		0.48				
Control Delay		10.0				
Queue Delay		0.0				
Total Delay		10.0				
LOS		B				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		10.0				
Approach LOS		B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 24 (28%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 10.0	Intersection LOS: B
Intersection Capacity Utilization 29.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 160: Tupper & Main

Lane Group	EBT
Lane Group Flow (vph)	1477
v/c Ratio	0.48
Control Delay	10.0
Queue Delay	0.0
Total Delay	10.0
Queue Length 50th (ft)	146
Queue Length 95th (ft)	179
Internal Link Dist (ft)	81
Turn Bay Length (ft)	
Base Capacity (vph)	3066
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.48

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	108	520	75	36	197	0	0	650	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.984						0.973	
Flt Protected					0.992		0.950					
Satd. Flow (prot)	0	0	0	0	6255	0	1770	1863	0	0	3444	0
Flt Permitted					0.992		0.200					
Satd. Flow (perm)	0	0	0	0	6255	0	373	1863	0	0	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					55						27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	120	578	83	40	219	0	0	722	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	781	0	40	219	0	0	878	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	15.0	50.0	0.0	0.0	20.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%	17.6%	58.8%	0.0%	0.0%	23.5%	0.0%
Maximum Green (s)				46.0	46.0		11.0				16.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

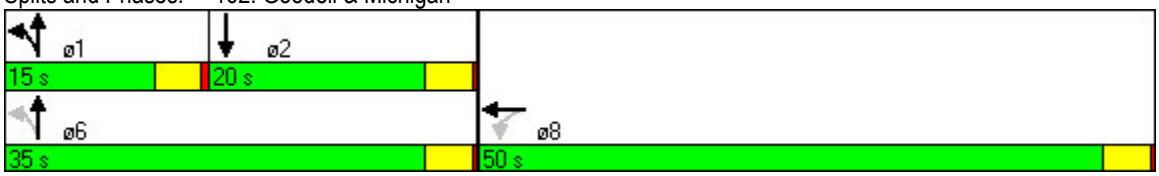
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	35.0
Total Split (%)	41%
Maximum Green (s)	31.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					47.0		31.4	31.4			17.0	
Actuated g/C Ratio					0.56		0.37	0.37			0.20	
v/c Ratio					0.22		0.12	0.32			1.23	
Control Delay					9.0		17.9	20.4			145.5	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					9.0		17.9	20.4			145.5	
LOS					A		B	C			F	
Approach Delay					9.0			20.0			145.5	
Approach LOS					A			C			F	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 84.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 73.0 — Intersection LOS: E
Intersection Capacity Utilization 46.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 162: Goodell & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	781	40	219	878
v/c Ratio	0.22	0.12	0.32	1.23
Control Delay	9.0	17.9	20.4	145.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.0	17.9	20.4	145.5
Queue Length 50th (ft)	53	13	81	~305
Queue Length 95th (ft)	69	34	135	#425
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	3508	338	706	715
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.12	0.31	1.23

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	16	708	87	87	94	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt					0.984							
Flt Protected					0.998			0.975				
Satd. Flow (prot)	0	0	0	0	6352	0	0	1815	0	0	0	0
Flt Permitted					0.998			0.975				
Satd. Flow (perm)	0	0	0	0	6352	0	0	1815	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					66							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		326			375			732			791	
Travel Time (s)		7.4			8.5			16.6			18.0	
Confl. Peds. (#/hr)						3						
Peak Hour Factor	0.90	0.90	0.90	0.50	0.85	0.83	0.78	0.88	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	1%	0%	4%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	32	833	105	112	107	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	970	0	0	219	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					
Protected Phases					8			2				
Permitted Phases				8			2					
Minimum Split (s)				40.0	40.0		25.0	25.0				
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)				50.4	50.4		25.4	25.4				
Yellow Time (s)				3.2	3.2		3.2	3.2				
All-Red Time (s)				1.4	1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0				
Flash Dont Walk (s)				11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)				0	0		0	0				
Act Effct Green (s)					52.4			27.4				
Actuated g/C Ratio					0.62			0.32				
v/c Ratio					0.25			0.37				
Control Delay					3.3			15.5				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0			0.0				
Total Delay					3.3			15.5				
LOS					A			B				
Approach Delay					3.3			15.5				
Approach LOS					A			B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 43 (51%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 29.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 163: Goodell & Ellicott

Lane Group	WBT	NBT
Lane Group Flow (vph)	970	219
v/c Ratio	0.25	0.37
Control Delay	3.3	15.5
Queue Delay	0.0	0.0
Total Delay	3.3	15.5
Queue Length 50th (ft)	20	48
Queue Length 95th (ft)	22	71
Internal Link Dist (ft)	295	652
Turn Bay Length (ft)		
Base Capacity (vph)	3941	585
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.25	0.37

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	28	483	11	89	252	0	0	240	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997							0.850
Flt Protected					0.997			0.985				
Satd. Flow (prot)	0	0	0	0	6363	0	0	1783	0	0	1792	1429
Flt Permitted					0.997			0.655				
Satd. Flow (perm)	0	0	0	0	6363	0	0	1185	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8							33
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	31	543	12	119	280	0	0	276	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	586	0	0	399	0	0	276	33
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	30.0	30.0	0.0	0.0	30.0	30.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	35.3%	35.3%	0.0%	0.0%	35.3%	35.3%
Maximum Green (s)				50.4	50.4		25.4	25.4			25.4	25.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					52.4			27.4			27.4	27.4
Actuated g/C Ratio					0.62			0.32			0.32	0.32
v/c Ratio					0.15			1.04			0.48	0.07
Control Delay					2.8			84.0			26.5	7.8
Queue Delay					0.0			0.0			0.0	0.0
Total Delay					2.8			84.0			26.5	7.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			F			C	A
Approach Delay					2.8			84.0			24.5	
Approach LOS					A			F			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 33.0	Intersection LOS: C
Intersection Capacity Utilization 48.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 164: Goodell & Washington

Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	586	399	276	33
v/c Ratio	0.15	1.04	0.48	0.07
Control Delay	2.8	84.0	26.5	7.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.8	84.0	26.5	7.8
Queue Length 50th (ft)	13	~238	117	0
Queue Length 95th (ft)	16	#416	181	8
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3926	382	578	483
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	1.04	0.48	0.07

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	313	89	54	129	0	0	0	0	35	1655	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.967										0.850
Flt Protected					0.985						0.999	
Satd. Flow (prot)	0	3422	0	0	3486	0	0	0	0	0	5080	1583
Flt Permitted					0.749						0.999	
Satd. Flow (perm)	0	3422	0	0	2651	0	0	0	0	0	5080	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17										148
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			465			349			422	
Travel Time (s)		3.8			10.6			7.9			9.6	
Peak Hour Factor	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)	0	348	99	60	143	0	0	0	0	39	1839	148
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	447	0	0	203	0	0	0	0	0	1878	148
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Minimum Split (s)		20.9		20.9	20.9					47.0	47.0	47.0
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	55.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	64.7%
Maximum Green (s)		25.1		25.1	25.1					50.1	50.1	50.1
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		1.7		1.7	1.7					1.7	1.7	1.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.9	3.0	3.9	3.9	3.0	3.0	3.0	3.0	3.9	3.9	3.9
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		26.1			26.1						51.1	51.1
Actuated g/C Ratio		0.31			0.31						0.60	0.60
v/c Ratio		0.42			0.25						0.61	0.15
Control Delay		24.0			16.0						14.4	3.1
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		24.0			16.0						14.4	3.1
LOS		C			B						B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		24.0			16.0						13.5	
Approach LOS		C			B						B	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Green, Master Intersection	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 312: Genesee & Oak

Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	447	203	1878	148
v/c Ratio	0.42	0.25	0.61	0.15
Control Delay	24.0	16.0	14.4	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	24.0	16.0	14.4	3.1
Queue Length 50th (ft)	95	27	239	5
Queue Length 95th (ft)	137	42	293	32
Internal Link Dist (ft)	89	385	342	
Turn Bay Length (ft)				
Base Capacity (vph)	1063	814	3054	1011
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.25	0.61	0.15

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	91	0	0	118	18	46	1681	48	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.980				0.850			
Flt Protected		0.974						0.999				
Satd. Flow (prot)	0	3447	0	0	3468	0	0	5080	1583	0	0	0
Flt Permitted		0.742						0.999				
Satd. Flow (perm)	0	2626	0	0	3468	0	0	5080	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					17				53			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		465			518			436			260	
Travel Time (s)		10.6			11.8			9.9			5.9	
Peak Hour Factor	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)	114	101	0	0	131	20	51	1868	53	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	215	0	0	151	0	0	1919	53	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm		Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Minimum Split (s)	24.0	24.0			24.0		42.0	42.0	42.0			
Total Split (s)	29.0	29.0	0.0	0.0	29.0	0.0	56.0	56.0	56.0	0.0	0.0	0.0
Total Split (%)	34.1%	34.1%	0.0%	0.0%	34.1%	0.0%	65.9%	65.9%	65.9%	0.0%	0.0%	0.0%
Maximum Green (s)	24.2	24.2			24.2		51.2	51.2	51.2			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	1.6	1.6			1.6		1.6	1.6	1.6			
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.8	3.8	3.0	3.0	3.8	3.0	3.8	3.8	3.8	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)		25.2			25.2			52.2	52.2			
Actuated g/C Ratio		0.30			0.30			0.61	0.61			
v/c Ratio		0.28			0.15			0.62	0.05			
Control Delay		8.4			19.9			8.0	0.2			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		8.4			19.9			8.0	0.2			
LOS		A			B			A	A			
Approach Delay		8.4			19.9			7.8				
Approach LOS		A			B			A				

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 4 (5%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 53.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 313: Genesee & Elm St

Lane Group	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	215	151	1919	53
v/c Ratio	0.28	0.15	0.62	0.05
Control Delay	8.4	19.9	8.0	0.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.4	19.9	8.0	0.2
Queue Length 50th (ft)	12	27	307	0
Queue Length 95th (ft)	18	50	279	m0
Internal Link Dist (ft)	385	438	356	
Turn Bay Length (ft)				200
Base Capacity (vph)	779	1040	3120	993
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.15	0.62	0.05

Intersection Summary

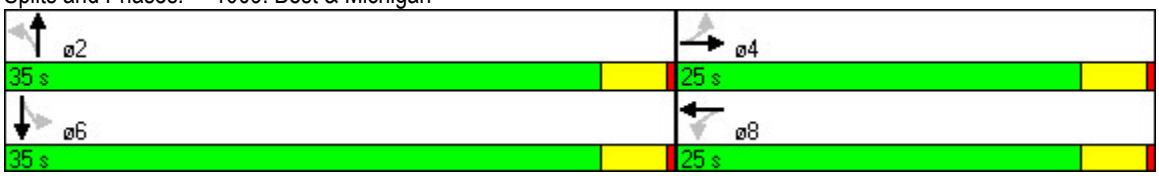
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	240	23	16	116	15	7	99	18	20	57	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.986			0.980			0.998	
Flt Protected		0.999			0.995			0.997			0.987	
Satd. Flow (prot)	0	1839	0	0	1827	0	0	1820	0	0	1835	0
Flt Permitted		0.998			0.956			0.990			0.937	
Satd. Flow (perm)	0	1837	0	0	1756	0	0	1807	0	0	1742	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			11			20			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			349			643			576	
Travel Time (s)		21.9			7.9			14.6			13.1	
Peak Hour Factor	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)	3	267	26	18	129	17	8	110	20	22	63	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	296	0	0	164	0	0	138	0	0	86	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
v/c Ratio		0.44			0.25			0.14			0.09	
Control Delay		16.4			13.6			6.5			7.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.4			13.6			6.5			7.2	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		16.4			13.6			6.5			7.2	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 34.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1009: Best & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	296	164	138	86
v/c Ratio	0.44	0.25	0.14	0.09
Control Delay	16.4	13.6	6.5	7.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.4	13.6	6.5	7.2
Queue Length 50th (ft)	76	37	19	14
Queue Length 95th (ft)	135	75	42	31
Internal Link Dist (ft)	884	269	563	496
Turn Bay Length (ft)				
Base Capacity (vph)	679	651	973	930
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.44	0.25	0.14	0.09

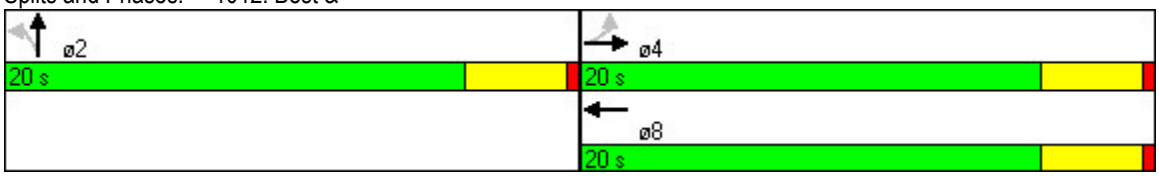
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	248	0	0	99	27	46	60	48	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.971			0.954				
Flt Protected		0.998						0.985				
Satd. Flow (prot)	0	1859	0	0	1809	0	0	3326	0	0	0	0
Flt Permitted		0.989						0.985				
Satd. Flow (perm)	0	1842	0	0	1809	0	0	3326	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					30			53				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		178			964			653			187	
Travel Time (s)		4.0			21.9			14.8			4.3	
Peak Hour Factor	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)	12	276	0	0	110	30	51	67	53	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	288	0	0	140	0	0	171	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	20.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	0.0%	50.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0			16.0		16.0	16.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.0			17.0			17.0				
Actuated g/C Ratio		0.42			0.42			0.42				
v/c Ratio		0.37			0.18			0.12				
Control Delay		9.6			6.6			5.4				
Queue Delay		0.0			0.0			0.0				
Total Delay		9.6			6.6			5.4				
LOS		A			A			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.6			6.6			5.4				
Approach LOS		A			A			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 40	
Actuated Cycle Length: 40	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 33.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1012: Best &



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	288	140	171
v/c Ratio	0.37	0.18	0.12
Control Delay	9.6	6.6	5.4
Queue Delay	0.0	0.0	0.0
Total Delay	9.6	6.6	5.4
Queue Length 50th (ft)	40	14	7
Queue Length 95th (ft)	81	36	19
Internal Link Dist (ft)	98	884	573
Turn Bay Length (ft)			
Base Capacity (vph)	783	786	1444
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.37	0.18	0.12

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	54	89	70	454	248	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.916				0.984	
Flt Protected	0.981			0.993		
Satd. Flow (prot)	1674	0	0	5050	3483	0
Flt Permitted	0.981			0.854		
Satd. Flow (perm)	1674	0	0	4343	3483	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	99				30	
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			287	353	
Travel Time (s)	7.3			6.5	8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	60	99	78	504	276	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	159	0	0	582	309	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Turn Type			Perm			
Protected Phases	4			2	6	
Permitted Phases			2			
Minimum Split (s)	20.0		20.0	20.0	20.0	
Total Split (s)	27.0	0.0	52.0	52.0	52.0	0.0
Total Split (%)	34.2%	0.0%	65.8%	65.8%	65.8%	0.0%
Maximum Green (s)	23.0		48.0	48.0	48.0	
Yellow Time (s)	3.5		3.5	3.5	3.5	
All-Red Time (s)	0.5		0.5	0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0		5.0	5.0	5.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effct Green (s)	24.0			49.0	49.0	
Actuated g/C Ratio	0.30			0.62	0.62	
v/c Ratio	0.28			0.22	0.14	
Control Delay	10.3			6.8	5.8	
Queue Delay	0.0			0.0	0.0	
Total Delay	10.3			6.8	5.8	
LOS	B			A	A	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach Delay	10.3			6.8	5.8	
Approach LOS	B			A	A	

Intersection Summary	
Area Type: Other	
Cycle Length: 79	
Actuated Cycle Length: 79	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 36.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1034: Allen & Main

Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	159	582	309
v/c Ratio	0.28	0.22	0.14
Control Delay	10.3	6.8	5.8
Queue Delay	0.0	0.0	0.0
Total Delay	10.3	6.8	5.8
Queue Length 50th (ft)	21	41	26
Queue Length 95th (ft)	64	56	42
Internal Link Dist (ft)	239	207	273
Turn Bay Length (ft)			
Base Capacity (vph)	577	2694	2172
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.28	0.22	0.14

Intersection Summary

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	222	1545	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.88	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	3539	2787	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	3539	2787	0	0	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	260			560	477	
Travel Time (s)	5.9			12.7	10.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	247	1717	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	247	1717	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.4%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1145	0	0	0	0	1545
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			969	284	
Travel Time (s)	7.3			22.0	6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1272	0	0	0	0	1717
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1272	0	0	0	0	1717
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 92.4%		ICU Level of Service F	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	517	1394	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	3539	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	422			611	490	
Travel Time (s)	9.6			13.9	11.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	574	1549	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	574	1549	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 152.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	1394	703	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	3433	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	3433	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	223			540	780	
Travel Time (s)	5.1			12.3	17.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	1549	781	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1549	781	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 152.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	206	161	438	422
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.934			
Flt Protected						0.975
Satd. Flow (prot)	0	0	3306	0	0	3451
Flt Permitted						0.975
Satd. Flow (perm)	0	0	3306	0	0	3451
Link Speed (mph)	30		30			30
Link Distance (ft)	547		441			294
Travel Time (s)	12.4		10.0			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	229	179	487	469
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	408	0	0	956
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	206	161	438	422
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	229	179	487	469
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			441			636
pX, platoon unblocked	0.82					
vC, conflicting volume	1526	204			408	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1206	204			408	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			58	
cM capacity (veh/h)	83	803			1147	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	153	255	643	313
Volume Left	0	0	487	0
Volume Right	0	179	0	0
cSH	1700	1700	1147	1700
Volume to Capacity	0.09	0.15	0.42	0.18
Queue Length 95th (ft)	0	0	54	0
Control Delay (s)	0.0	0.0	9.1	0.0
Lane LOS			A	
Approach Delay (s)	0.0		6.1	
Approach LOS				

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	137	27	16	185	48	30	362	24	59	283	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.981			0.974			0.991			0.988	
Flt Protected		0.992			0.997			0.996			0.992	
Satd. Flow (prot)	0	1813	0	0	1809	0	0	5019	0	0	3469	0
Flt Permitted		0.895			0.979			0.895			0.863	
Satd. Flow (perm)	0	1635	0	0	1776	0	0	4510	0	0	3018	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			16			12			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		111			158			910			482	
Travel Time (s)		2.5			3.6			20.7			11.0	
Peak Hour Factor	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)	33	152	30	18	206	53	33	402	27	66	314	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	215	0	0	277	0	0	462	0	0	412	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	1 6	
Permitted Phases	4			8			2			1 6		
Detector Phase	4	4		8	8		2	2		1	1 6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		10.0		
Total Split (s)	33.0	33.0	0.0	33.0	33.0	0.0	29.0	29.0	0.0	22.0	73.0	0.0
Total Split (%)	39.3%	39.3%	0.0%	39.3%	39.3%	0.0%	34.5%	34.5%	0.0%	26.2%	86.9%	0.0%
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		16.0		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		5.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5		

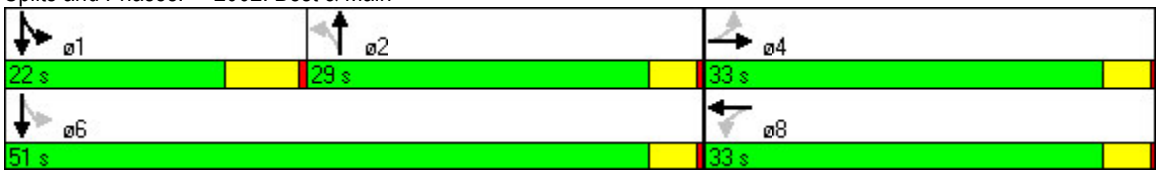
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	51.0
Total Split (%)	61%
Maximum Green (s)	47.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-3.0	-3.0	-1.0
Total Lost Time (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
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		
Recall Mode	Min	Min		Min	Min		Max	Max		Max		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0	0		0	0				
Act Effct Green (s)		16.6			16.6			26.1			48.2	
Actuated g/C Ratio		0.23			0.23			0.37			0.68	
v/c Ratio		0.55			0.65			0.28			0.19	
Control Delay		27.9			30.2			16.6			4.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.9			30.2			16.6			4.7	
LOS		C			C			B			A	
Approach Delay		27.9			30.2			16.6			4.7	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 84
Actuated Cycle Length: 70.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 17.6 — Intersection LOS: B
Intersection Capacity Utilization 47.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2002: Best & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	215	277	462	412
v/c Ratio	0.55	0.65	0.28	0.19
Control Delay	27.9	30.2	16.6	4.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.9	30.2	16.6	4.7
Queue Length 50th (ft)	78	102	49	26
Queue Length 95th (ft)	138	174	83	57
Internal Link Dist (ft)	31	78	830	402
Turn Bay Length (ft)				
Base Capacity (vph)	702	765	1671	2181
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.36	0.28	0.19

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	66	91	41	24	117	38	119	363	19	26	336	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.972			0.972			0.994			0.977	
Flt Protected		0.984			0.993			0.988			0.997	
Satd. Flow (prot)	0	1782	0	0	1798	0	0	4994	0	0	3447	0
Flt Permitted		0.811			0.951			0.786			0.908	
Satd. Flow (perm)	0	1468	0	0	1722	0	0	3973	0	0	3140	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			20			13			31	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		250			335			338			910	
Travel Time (s)		5.7			7.6			7.7			20.7	
Peak Hour Factor	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)	73	101	46	27	130	42	132	403	21	29	373	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	220	0	0	199	0	0	556	0	0	473	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	14.0	60.0	0.0	32.0	32.0	0.0
Total Split (%)	38.7%	38.7%	0.0%	38.7%	38.7%	0.0%	18.7%	80.0%	0.0%	42.7%	42.7%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0			28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

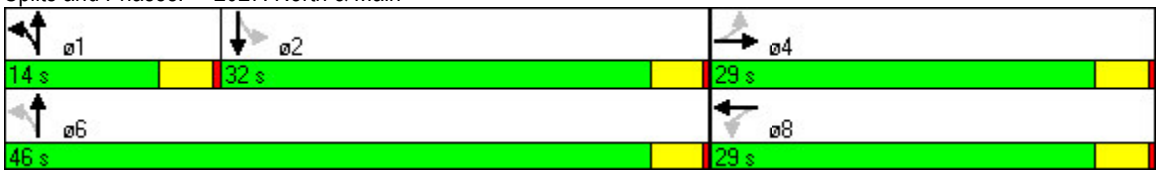
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	46.0
Total Split (%)	61%
Maximum Green (s)	42.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		None			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		14.3			14.3			41.5			29.2	
Actuated g/C Ratio		0.23			0.23			0.67			0.47	
v/c Ratio		0.62			0.48			0.20			0.31	
Control Delay		27.7			22.5			4.4			11.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.7			22.5			4.4			11.1	
LOS		C			C			A			B	
Approach Delay		27.7			22.5			4.3			11.1	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 61.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.62
Intersection Signal Delay: 12.6 — Intersection LOS: B
Intersection Capacity Utilization 54.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2027: North & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	220	199	556	473
v/c Ratio	0.62	0.48	0.20	0.31
Control Delay	27.7	22.5	4.4	11.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.7	22.5	4.4	11.1
Queue Length 50th (ft)	66	57	21	49
Queue Length 95th (ft)	132	113	46	100
Internal Link Dist (ft)	170	255	258	830
Turn Bay Length (ft)				
Base Capacity (vph)	634	742	2974	1502
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.27	0.19	0.31

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	43	51	521	15	20	578
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.927		0.996			
Flt Protected	0.978					0.998
Satd. Flow (prot)	1689	0	5016	0	0	3498
Flt Permitted	0.978					0.929
Satd. Flow (perm)	1689	0	5016	0	0	3256
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	57		10			
Link Speed (mph)	30		30			30
Link Distance (ft)	394		482			736
Travel Time (s)	9.0		11.0			16.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Adj. Flow (vph)	48	57	579	17	22	642
Shared Lane Traffic (%)						
Lane Group Flow (vph)	105	0	596	0	0	664
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Maximum Green (s)	21.0		51.0		51.0	51.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	8.0		62.7			62.7
Actuated g/C Ratio	0.11		0.83			0.83
v/c Ratio	0.46		0.14			0.25
Control Delay	23.0		2.0			2.4
Queue Delay	0.0		0.0			0.0
Total Delay	23.0		2.0			2.4
LOS	C		A			A
Approach Delay	23.0		2.0			2.4
Approach LOS	C		A			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.8
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 3.8 — Intersection LOS: A
Intersection Capacity Utilization 42.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2101: Dodge & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	105	596	664
v/c Ratio	0.46	0.14	0.25
Control Delay	23.0	2.0	2.4
Queue Delay	0.0	0.0	0.0
Total Delay	23.0	2.0	2.4
Queue Length 50th (ft)	23	16	30
Queue Length 95th (ft)	61	31	57
Internal Link Dist (ft)	314	402	656
Turn Bay Length (ft)			
Base Capacity (vph)	510	4153	2694
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.21	0.14	0.25

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	30	20	5	40	5	190	300	20	10	295	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.951			0.986			0.995			0.990	
Flt Protected		0.995			0.995			0.982			0.999	
Satd. Flow (prot)	0	1763	0	0	1827	0	0	1820	0	0	1842	0
Flt Permitted		0.961			0.961			0.759			0.983	
Satd. Flow (perm)	0	1702	0	0	1765	0	0	1407	0	0	1813	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			6			6			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			388			675			662	
Travel Time (s)		8.6			8.8			15.3			15.0	
Peak Hour Factor	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)	6	33	22	6	44	6	211	333	22	11	328	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	61	0	0	56	0	0	566	0	0	367	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	14.0	51.0	0.0	23.0	23.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%	23.3%	85.0%	0.0%	38.3%	38.3%	0.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		10.0			19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	37.0
Total Split (%)	62%
Maximum Green (s)	33.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		Max			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		7.8			7.8			34.6			20.4	
Actuated g/C Ratio		0.18			0.18			0.79			0.46	
v/c Ratio		0.19			0.18			0.47			0.44	
Control Delay		13.9			16.9			4.1			11.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.9			16.9			4.1			11.4	
LOS		B			B			A			B	
Approach Delay		13.9			16.9			4.1			11.4	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 44
Natural Cycle: 55
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 7.9 — Intersection LOS: A
Intersection Capacity Utilization 59.1% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Carlton & Michigan

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	61	56	566	367
v/c Ratio	0.19	0.18	0.47	0.44
Control Delay	13.9	16.9	4.1	11.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.9	16.9	4.1	11.4
Queue Length 50th (ft)	9	12	43	68
Queue Length 95th (ft)	34	36	97	135
Internal Link Dist (ft)	297	308	595	582
Turn Bay Length (ft)				
Base Capacity (vph)	800	821	1214	843
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.08	0.07	0.47	0.44

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	110	30	15	65	20	55	230	40	5	80	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.973			0.984			0.980	
Flt Protected		0.998			0.992			0.992			0.997	
Satd. Flow (prot)	0	1807	0	0	1798	0	0	1818	0	0	1820	0
Flt Permitted		0.998			0.992			0.992			0.997	
Satd. Flow (perm)	0	1807	0	0	1798	0	0	1818	0	0	1820	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			293	
Travel Time (s)		7.4			17.0			9.7			6.7	
Peak Hour Factor	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)	6	122	33	17	72	22	61	256	44	6	89	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	0	111	0	0	361	0	0	112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 42.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	110	30	15	65	20	55	230	40	5	80	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	122	33	17	72	22	61	256	44	6	89	17

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	161	111	361	111
Volume Left (vph)	6	17	61	6
Volume Right (vph)	33	22	44	17
Hadj (s)	-0.08	-0.06	-0.01	-0.05
Departure Headway (s)	5.2	5.3	4.8	5.1
Degree Utilization, x	0.23	0.16	0.48	0.16
Capacity (veh/h)	631	611	722	648
Control Delay (s)	9.7	9.3	12.1	9.0
Approach Delay (s)	9.7	9.3	12.1	9.0
Approach LOS	A	A	B	A

Intersection Summary			
Delay	10.7		
HCM Level of Service	B		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	130	35	40	80	15	10	40	25	10	45	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.972			0.985			0.954			0.987	
Flt Protected		0.998			0.986			0.993			0.992	
Satd. Flow (prot)	0	1807	0	0	1809	0	0	1765	0	0	3465	0
Flt Permitted		0.998			0.986			0.993			0.992	
Satd. Flow (perm)	0	1807	0	0	1809	0	0	1765	0	0	3465	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		287			325			1308			290	
Travel Time (s)		6.5			7.4			29.7			6.6	
Peak Hour Factor	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)	6	144	39	44	89	17	11	44	28	11	50	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	150	0	0	83	0	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 37.4%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	130	35	40	80	15	10	40	25	10	45	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	144	39	44	89	17	11	44	28	11	50	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	189	150	83	36	31
Volume Left (vph)	6	44	11	11	0
Volume Right (vph)	39	17	28	0	6
Hadj (s)	-0.08	0.03	-0.14	0.19	-0.09
Departure Headway (s)	4.4	4.5	4.7	5.6	5.3
Degree Utilization, x	0.23	0.19	0.11	0.06	0.04
Capacity (veh/h)	792	756	703	600	633
Control Delay (s)	8.7	8.6	8.3	7.7	7.3
Approach Delay (s)	8.7	8.6	8.3	7.5	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	8.4		
HCM Level of Service	A		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	50	265	20	125	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.887		0.990			
Flt Protected	0.992					0.988
Satd. Flow (prot)	1639	0	3504	0	0	5024
Flt Permitted	0.992					0.988
Satd. Flow (perm)	1639	0	3504	0	0	5024
Link Speed (mph)	30		30			30
Link Distance (ft)	287		532			287
Travel Time (s)	6.5		12.1			6.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	56	294	22	139	456
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	0	316	0	0	595
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 32.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	50	265	20	125	410
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	56	294	22	139	456
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			532			287
pX, platoon unblocked	0.96					
vC, conflicting volume	735	158			317	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	581	158			317	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	94			89	
cM capacity (veh/h)	379	859			1240	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	67	196	120	230	182	182
Volume Left	11	0	0	139	0	0
Volume Right	56	0	22	0	0	0
cSH	709	1700	1700	1240	1700	1700
Volume to Capacity	0.09	0.12	0.07	0.11	0.11	0.11
Queue Length 95th (ft)	8	0	0	9	0	0
Control Delay (s)	10.6	0.0	0.0	5.4	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	10.6	0.0		2.1		
Approach LOS	B					

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	35	25	5	30	15	120	220	15	10	250	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.952			0.959			0.994			0.972	
Flt Protected		0.993			0.995			0.983			0.998	
Satd. Flow (prot)	0	1761	0	0	1777	0	0	1820	0	0	3433	0
Flt Permitted		0.971			0.979			0.782			0.944	
Satd. Flow (perm)	0	1722	0	0	1749	0	0	1448	0	0	3247	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			17			7			67	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1103			233			662			363	
Travel Time (s)		25.1			5.3			15.0			8.3	
Peak Hour Factor	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)	11	39	28	6	33	17	133	244	17	11	278	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	78	0	0	56	0	0	394	0	0	356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.15			0.11			0.44			0.18	
Control Delay		12.4			12.9			7.8			4.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.4			12.9			7.8			4.2	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		12.4			12.9			7.8			4.2	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 7.1	Intersection LOS: A
Intersection Capacity Utilization 44.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: High & Michigan

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	78	56	394	356
v/c Ratio	0.15	0.11	0.44	0.18
Control Delay	12.4	12.9	7.8	4.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.4	12.9	7.8	4.2
Queue Length 50th (ft)	13	10	62	19
Queue Length 95th (ft)	40	33	113	34
Internal Link Dist (ft)	1023	153	582	283
Turn Bay Length (ft)				
Base Capacity (vph)	508	508	896	2028
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.11	0.44	0.18

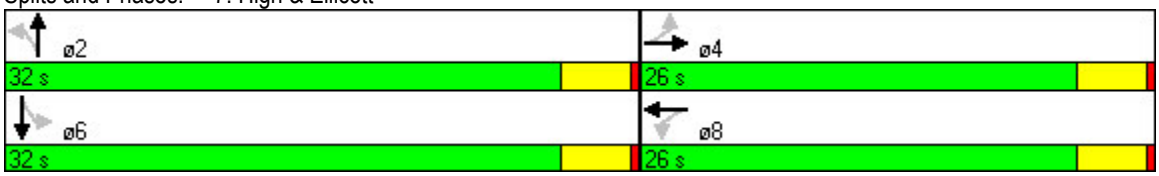
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	110	10	20	125	25	60	150	115	0	60	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.980			0.952				
Flt Protected		0.994			0.994			0.991				
Satd. Flow (prot)	0	1833	0	0	1815	0	0	1757	0	0	1863	0
Flt Permitted		0.966			0.965			0.942				
Satd. Flow (perm)	0	1781	0	0	1762	0	0	1670	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			18			68				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			1103			365			365	
Travel Time (s)		7.8			25.1			8.3			8.3	
Peak Hour Factor	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)	17	122	11	22	139	28	67	167	128	0	67	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	189	0	0	362	0	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	32.0	32.0	0.0	32.0	32.0	0.0
Total Split (%)	44.8%	44.8%	0.0%	44.8%	44.8%	0.0%	55.2%	55.2%	0.0%	55.2%	55.2%	0.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		23.0			23.0			29.0			29.0	
Actuated g/C Ratio		0.40			0.40			0.50			0.50	
v/c Ratio		0.21			0.27			0.42			0.07	
Control Delay		11.9			11.9			9.1			7.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.9			11.9			9.1			7.8	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.9			11.9			9.1			7.8	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 44.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: High & Ellicott



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	150	189	362	67
v/c Ratio	0.21	0.27	0.42	0.07
Control Delay	11.9	11.9	9.1	7.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.9	11.9	9.1	7.8
Queue Length 50th (ft)	31	38	57	11
Queue Length 95th (ft)	64	76	110	27
Internal Link Dist (ft)	262	1023	285	285
Turn Bay Length (ft)				
Base Capacity (vph)	711	710	869	932
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.27	0.42	0.07

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lane Configurations							
Volume (vph)	35	60	310	40	100	335	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91	
Frt	0.915		0.983				
Flt Protected	0.982					0.989	
Satd. Flow (prot)	1674	0	3479	0	0	5029	
Flt Permitted	0.982					0.811	
Satd. Flow (perm)	1674	0	3479	0	0	4124	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	67		22				
Link Speed (mph)	30		30			30	
Link Distance (ft)	293		353			353	
Travel Time (s)	6.7		8.0			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	39	67	344	44	111	372	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	106	0	388	0	0	483	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		1		1	1	
Detector Template							
Leading Detector (ft)	50		50		50	50	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	50		50		50	50	
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Turn Type					custom		
Protected Phases	8		2		1	1 6	6
Permitted Phases					6		
Detector Phase	8		2		1	1 6	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0		4.0
Minimum Split (s)	20.0		20.0		8.0		20.0
Total Split (s)	27.0	0.0	36.0	0.0	14.0	64.0	50.0
Total Split (%)	35.1%	0.0%	46.8%	0.0%	18.2%	83.1%	65%
Maximum Green (s)	23.0		32.0		10.0		46.0
Yellow Time (s)	3.5		3.5		3.5		3.5
All-Red Time (s)	0.5		0.5		0.5		0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lead/Lag			Lag		Lead		
Lead-Lag Optimize?			Yes		Yes		
Vehicle Extension (s)	3.0		3.0		3.0		3.0
Recall Mode	Min		Max		None		Max
Walk Time (s)	5.0		5.0				5.0
Flash Dont Walk (s)	11.0		11.0				11.0
Pedestrian Calls (#/hr)	0		0				0
Act Effct Green (s)	8.3		35.8			47.0	
Actuated g/C Ratio	0.14		0.58			0.77	
v/c Ratio	0.37		0.19			0.15	
Control Delay	15.4		6.4			2.1	
Queue Delay	0.0		0.0			0.0	
Total Delay	15.4		6.4			2.1	
LOS	B		A			A	
Approach Delay	15.4		6.4			2.1	
Approach LOS	B		A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 77	
Actuated Cycle Length: 61.3	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 5.2	Intersection LOS: A
Intersection Capacity Utilization 34.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: High & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	106	388	483
v/c Ratio	0.37	0.19	0.15
Control Delay	15.4	6.4	2.1
Queue Delay	0.0	0.0	0.0
Total Delay	15.4	6.4	2.1
Queue Length 50th (ft)	13	28	10
Queue Length 95th (ft)	51	58	22
Internal Link Dist (ft)	213	273	273
Turn Bay Length (ft)			
Base Capacity (vph)	696	2041	3326
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.15	0.19	0.15

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	15	25	0	0	0	210	550	10	5	245	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.926						0.998			0.992	
Flt Protected		0.994						0.987			0.999	
Satd. Flow (prot)	0	1715	0	0	0	0	0	1835	0	0	1846	0
Flt Permitted		0.994						0.827			0.987	
Satd. Flow (perm)	0	1715	0	0	0	0	0	1537	0	0	1824	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28						2			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			376			922			675	
Travel Time (s)		8.3			8.5			21.0			15.3	
Peak Hour Factor	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)	6	17	28	0	0	0	233	611	11	6	272	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	0	0	0	855	0	0	295	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm			Perm		
Protected Phases		4						2			6	
Permitted Phases	4						2			6		
Minimum Split (s)	20.0	20.0					20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0					36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5					3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5					0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0					5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.0						37.0			37.0	
Actuated g/C Ratio		0.28						0.62			0.62	
v/c Ratio		0.10						0.90			0.26	
Control Delay		10.3						25.8			5.8	
Queue Delay		0.0						0.0			0.0	
Total Delay		10.3						25.8			5.8	
LOS		B						C			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.3						25.8			5.8	
Approach LOS		B						C			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 20.2	Intersection LOS: C
Intersection Capacity Utilization 68.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Virginia & Michigan

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	51	855	295
v/c Ratio	0.10	0.90	0.26
Control Delay	10.3	25.8	5.8
Queue Delay	0.0	0.0	0.0
Total Delay	10.3	25.8	5.8
Queue Length 50th (ft)	6	227	40
Queue Length 95th (ft)	27	#495	71
Internal Link Dist (ft)	283	842	595
Turn Bay Length (ft)			
Base Capacity (vph)	506	949	1129
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.10	0.90	0.26

Intersection Summary

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	20	40	315	60	5	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910		0.978			
Flt Protected	0.984					0.998
Satd. Flow (prot)	1668	0	1822	0	0	1859
Flt Permitted	0.984					0.998
Satd. Flow (perm)	1668	0	1822	0	0	1859
Link Speed (mph)	30		30			30
Link Distance (ft)	735		148			425
Travel Time (s)	16.7		3.4			9.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	44	350	67	6	128
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	417	0	0	134
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 30.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	20	40	315	60	5	115
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	44	350	67	6	128
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			939			
pX, platoon unblocked						
vC, conflicting volume	522	383			417	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522	383			417	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	96	93			100	
cM capacity (veh/h)	512	664			1142	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	67	417	133
Volume Left	22	0	6
Volume Right	44	67	0
cSH	604	1700	1142
Volume to Capacity	0.11	0.25	0.00
Queue Length 95th (ft)	9	0	0
Control Delay (s)	11.7	0.0	0.4
Lane LOS	B		A
Approach Delay (s)	11.7	0.0	0.4
Approach LOS	B		

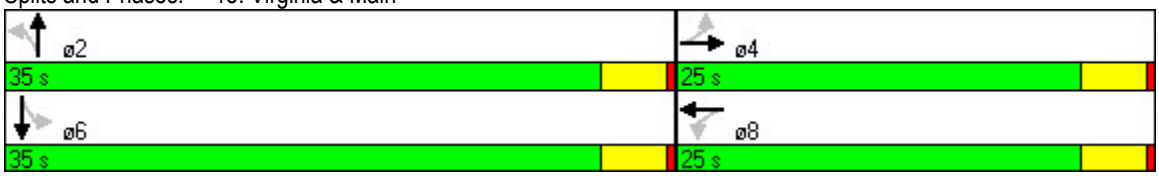
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	35	15	5	10	5	10	210	5	10	245	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.973			0.965			0.996			0.977	
Flt Protected		0.984			0.987			0.998			0.998	
Satd. Flow (prot)	0	1783	0	0	1774	0	0	3518	0	0	4958	0
Flt Permitted		0.880			0.939			0.942			0.932	
Satd. Flow (perm)	0	1595	0	0	1688	0	0	3321	0	0	4630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			6			6			50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		513			160			728			532	
Travel Time (s)		11.7			3.6			16.5			12.1	
Peak Hour Factor	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)	28	39	17	6	11	6	11	233	6	11	272	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	23	0	0	250	0	0	333	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.6			7.4			42.4			42.4	
Actuated g/C Ratio		0.15			0.14			0.81			0.81	
v/c Ratio		0.34			0.09			0.09			0.09	
Control Delay		20.1			16.2			2.5			2.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.1			16.2			2.5			2.1	
LOS		C			B			A			A	
Approach Delay		20.1			16.2			2.5			2.1	
Approach LOS		C			B			A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 52.2	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 26.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Virginia & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	84	23	250	333
v/c Ratio	0.34	0.09	0.09	0.09
Control Delay	20.1	16.2	2.5	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.1	16.2	2.5	2.1
Queue Length 50th (ft)	22	6	9	7
Queue Length 95th (ft)	45	18	21	16
Internal Link Dist (ft)	433	80	648	452
Turn Bay Length (ft)				
Base Capacity (vph)	655	686	2697	3768
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.13	0.03	0.09	0.09

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	125	30	15	60	5	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.974				0.889	
Flt Protected				0.990	0.991	
Satd. Flow (prot)	1814	0	0	1844	1641	0
Flt Permitted				0.990	0.991	
Satd. Flow (perm)	1814	0	0	1844	1641	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	747			377	583	
Travel Time (s)	17.0			8.6	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	139	33	17	67	6	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	0	0	84	34	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 25.7%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	125	30	15	60	5	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	139	33	17	67	6	28

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	172	83	33
Volume Left (vph)	0	17	6
Volume Right (vph)	33	0	28
Hadj (s)	-0.08	0.07	-0.43
Departure Headway (s)	4.0	4.2	4.0
Degree Utilization, x	0.19	0.10	0.04
Capacity (veh/h)	891	840	838
Control Delay (s)	7.9	7.7	7.2
Approach Delay (s)	7.9	7.7	7.2
Approach LOS	A	A	A

Intersection Summary			
Delay	7.7		
HCM Level of Service	A		
Intersection Capacity Utilization	25.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	25	40	35	235	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.883		0.966	
Flt Protected		0.981			0.964	
Satd. Flow (prot)	0	1827	1645	0	1735	0
Flt Permitted		0.981			0.964	
Satd. Flow (perm)	0	1827	1645	0	1735	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		735	363		583	
Travel Time (s)		16.7	8.3		13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	44	39	261	33	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	72	300	0	44	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 33.2%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	25	40	35	235	30	10
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)	28	44	39	261	33	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)			363			
pX, platoon unblocked						
vC, conflicting volume	300				269	169
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	300				269	169
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				95	99
cM capacity (veh/h)	1261				704	874

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	72	300	44
Volume Left	28	0	33
Volume Right	0	261	11
cSH	1261	1700	740
Volume to Capacity	0.02	0.18	0.06
Queue Length 95th (ft)	2	0	5
Control Delay (s)	3.2	0.0	10.2
Lane LOS	A		B
Approach Delay (s)	3.2	0.0	10.2
Approach LOS			B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	260	50	5	130	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.865	
Flt Protected				0.998		
Satd. Flow (prot)	1822	0	0	1859	1611	0
Flt Permitted				0.998		
Satd. Flow (perm)	1822	0	0	1859	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	791			148	443	
Travel Time (s)	18.0			3.4	10.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	289	56	6	144	0	172
Shared Lane Traffic (%)						
Lane Group Flow (vph)	345	0	0	150	172	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 33.0%	ICU Level of Service A
Analysis Period (min) 15	

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	260	50	5	130	0	155
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)	289	56	6	144	0	172
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	791					
pX, platoon unblocked						
vC, conflicting volume			344		472	317
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			344		472	317
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		100	76
cM capacity (veh/h)			1215		548	724

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	344	150	172
Volume Left	0	6	0
Volume Right	56	0	172
cSH	1700	1215	724
Volume to Capacity	0.20	0.00	0.24
Queue Length 95th (ft)	0	0	23
Control Delay (s)	0.0	0.3	11.5
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	11.5
Approach LOS			B

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	95	0	0	176	14	33	59	19	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.990			0.977				
Flt Protected		0.993						0.985				
Satd. Flow (prot)	0	1850	0	0	1844	0	0	1793	0	0	0	0
Flt Permitted		0.993						0.985				
Satd. Flow (perm)	0	1850	0	0	1844	0	0	1793	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			1080			316			653	
Travel Time (s)		6.8			24.5			7.2			14.8	
Peak Hour Factor	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)	16	106	0	0	196	16	37	66	21	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	212	0	0	124	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	14	95	0	0	176	14	33	59	19	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	16	106	0	0	196	16	37	66	21	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	121	211	123
Volume Left (vph)	16	0	37
Volume Right (vph)	0	16	21
Hadj (s)	0.06	-0.01	-0.01
Departure Headway (s)	4.5	4.3	4.6
Degree Utilization, x	0.15	0.25	0.16
Capacity (veh/h)	770	797	725
Control Delay (s)	8.3	8.8	8.5
Approach Delay (s)	8.3	8.8	8.5
Approach LOS	A	A	A

Intersection Summary			
Delay	8.6		
HCM Level of Service	A		
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	60	25	75	150	35	45	80	25	30	190	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.982				0.850		0.979	
Flt Protected		0.997			0.986			0.982			0.994	
Satd. Flow (prot)	0	1788	0	0	1804	0	0	1829	1583	0	1813	0
Flt Permitted		0.984			0.899			0.848			0.965	
Satd. Flow (perm)	0	1765	0	0	1644	0	0	1580	1583	0	1760	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			10				28		28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			414			330			643	
Travel Time (s)		24.5			9.4			7.5			14.6	
Peak Hour Factor	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)	6	67	28	83	167	39	50	89	28	33	211	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	289	0	0	139	28	0	288	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	51.0	51.0	51.0	51.0	51.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	28.2%	28.2%	0.0%	71.8%	71.8%	71.8%	71.8%	71.8%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		15.8			15.8			49.4	49.4		49.4	
Actuated g/C Ratio		0.22			0.22			0.69	0.69		0.69	
v/c Ratio		0.25			0.77			0.13	0.03		0.23	
Control Delay		18.5			40.6			4.3	1.7		4.4	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		18.5			40.6			4.3	1.7		4.4	
LOS		B			D			A	A		A	
Approach Delay		18.5			40.6			3.9			4.4	
Approach LOS		B			D			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 71
Actuated Cycle Length: 71.2
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 18.3 — Intersection LOS: B
Intersection Capacity Utilization 48.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 21: North & Michigan

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	101	289	139	28	288
v/c Ratio	0.25	0.77	0.13	0.03	0.23
Control Delay	18.5	40.6	4.3	1.7	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	40.6	4.3	1.7	4.4
Queue Length 50th (ft)	26	112	18	0	36
Queue Length 95th (ft)	63	#219	35	7	63
Internal Link Dist (ft)	1000	334	250		563
Turn Bay Length (ft)					
Base Capacity (vph)	441	400	1096	1107	1230
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.23	0.72	0.13	0.03	0.23

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	10	5	10	5	20	15	20	5	35	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.955			0.965			0.951			0.982	
Flt Protected		0.984			0.987			0.982			0.994	
Satd. Flow (prot)	0	1750	0	0	1774	0	0	1740	0	0	3455	0
Flt Permitted		0.984			0.987			0.982			0.994	
Satd. Flow (perm)	0	1750	0	0	1774	0	0	1740	0	0	3455	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			326			290			355	
Travel Time (s)		6.5			7.4			6.6			8.1	
Peak Hour Factor	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)	11	11	11	6	11	6	22	17	22	6	39	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	0	0	23	0	0	61	0	0	51	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 19.8%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	5	10	5	20	15	20	5	35	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	11	11	6	11	6	22	17	22	6	39	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	33	22	61	25	25
Volume Left (vph)	11	6	22	6	0
Volume Right (vph)	11	6	22	0	6
Hadj (s)	-0.10	-0.07	-0.11	0.15	-0.12
Departure Headway (s)	4.1	4.1	4.1	4.8	4.5
Degree Utilization, x	0.04	0.03	0.07	0.03	0.03
Capacity (veh/h)	857	848	862	736	772
Control Delay (s)	7.2	7.2	7.4	6.8	6.5
Approach Delay (s)	7.2	7.2	7.4	6.6	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	7.1		
HCM Level of Service	A		
Intersection Capacity Utilization	19.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	30	0	15	55	50	35	155	35	0	30	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.944			0.979				
Flt Protected		0.974			0.994			0.992				
Satd. Flow (prot)	0	1814	0	0	1748	0	0	1809	0	0	1863	0
Flt Permitted		0.974			0.994			0.992				
Satd. Flow (perm)	0	1814	0	0	1748	0	0	1809	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		655			1107			365			316	
Travel Time (s)		14.9			25.2			8.3			7.2	
Peak Hour Factor	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)	39	33	0	17	61	56	39	172	39	0	33	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	72	0	0	134	0	0	250	0	0	33	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 35.7%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	35	30	0	15	55	50	35	155	35	0	30	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	33	0	17	61	56	39	172	39	0	33	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	72	133	250	33
Volume Left (vph)	39	17	39	0
Volume Right (vph)	0	56	39	0
Hadj (s)	0.14	-0.19	-0.03	0.03
Departure Headway (s)	4.9	4.5	4.4	4.7
Degree Utilization, x	0.10	0.17	0.31	0.04
Capacity (veh/h)	683	750	783	708
Control Delay (s)	8.4	8.4	9.3	7.9
Approach Delay (s)	8.4	8.4	9.3	7.9
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.8		
HCM Level of Service	A		
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	15	310	15	30	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.918		0.993			
Flt Protected	0.981					0.994
Satd. Flow (prot)	1678	0	3514	0	0	5055
Flt Permitted	0.981					0.994
Satd. Flow (perm)	1678	0	3514	0	0	5055
Link Speed (mph)	30		30			30
Link Distance (ft)	655		353			338
Travel Time (s)	14.9		8.0			7.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	17	344	17	33	244
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	361	0	0	277
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 27.2%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	15	310	15	30	220
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	17	344	17	33	244
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			353			338
pX, platoon unblocked						
vC, conflicting volume	501	181			361	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	501	181			361	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	98			97	
cM capacity (veh/h)	485	831			1194	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	28	230	131	82	98	98
Volume Left	11	0	0	33	0	0
Volume Right	17	0	17	0	0	0
cSH	647	1700	1700	1194	1700	1700
Volume to Capacity	0.04	0.14	0.08	0.03	0.06	0.06
Queue Length 95th (ft)	3	0	0	2	0	0
Control Delay (s)	10.8	0.0	0.0	3.4	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	10.8	0.0		1.0		
Approach LOS	B					

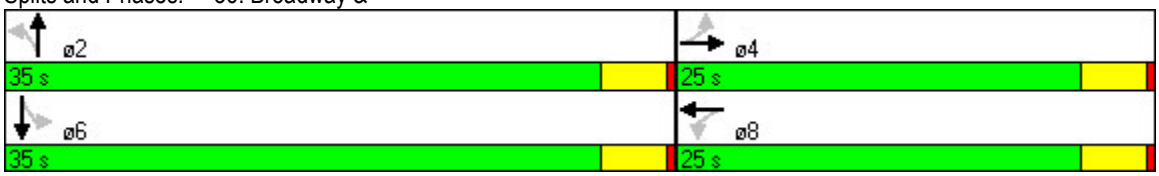
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	130	10	30	250	50	35	515	30	20	220	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.991			0.977			0.992			0.983	
Flt Protected		0.992			0.996			0.997			0.996	
Satd. Flow (prot)	0	3286	0	0	3346	0	0	3433	0	0	3398	0
Flt Permitted		0.880			0.920			0.923			0.903	
Satd. Flow (perm)	0	2915	0	0	3090	0	0	3178	0	0	3081	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			38			13			33	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		282			892			685			803	
Travel Time (s)		6.4			20.3			15.6			18.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	8%	5%	5%	5%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	28	144	11	33	278	56	39	572	33	22	244	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	367	0	0	644	0	0	299	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.18			0.33			0.39			0.19	
Control Delay		13.3			13.8			9.5			5.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.3			13.8			9.5			5.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		13.3			13.8			9.5			5.8	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.39	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 51.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 36: Broadway &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	183	367	644	299
v/c Ratio	0.18	0.33	0.39	0.19
Control Delay	13.3	13.8	9.5	5.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.3	13.8	9.5	5.8
Queue Length 50th (ft)	22	44	66	20
Queue Length 95th (ft)	41	74	98	20
Internal Link Dist (ft)	202	812	605	723
Turn Bay Length (ft)				
Base Capacity (vph)	1027	1106	1648	1608
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.33	0.39	0.19

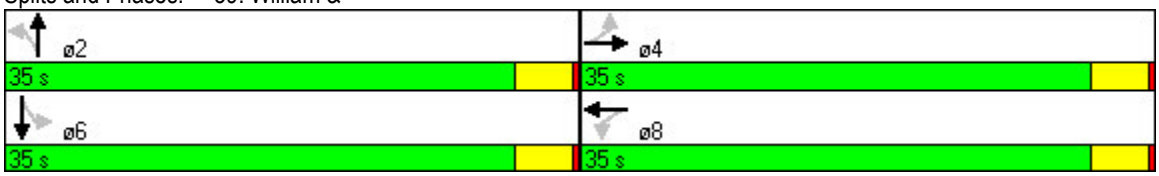
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	85	10	65	225	70	45	520	0	35	190	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.986			0.971						0.988	
Flt Protected		0.993			0.991			0.996			0.993	
Satd. Flow (prot)	0	3100	0	0	3406	0	0	3491	0	0	3373	0
Flt Permitted		0.898			0.881			0.908			0.838	
Satd. Flow (perm)	0	2804	0	0	3028	0	0	3182	0	0	2847	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			54						17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			766			273			685	
Travel Time (s)		6.7			17.4			6.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	14%	14%	2%	2%	2%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	17	94	11	72	250	78	50	578	0	39	211	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	400	0	0	628	0	0	272	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		31.0			31.0			31.0			31.0	
Actuated g/C Ratio		0.44			0.44			0.44			0.44	
v/c Ratio		0.10			0.29			0.45			0.21	
Control Delay		10.6			11.4			14.8			11.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.6			11.4			14.8			11.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			B			B	
Approach Delay		10.6			11.4			14.8			11.8	
Approach LOS		B			B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 39: William &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	122	400	628	272
v/c Ratio	0.10	0.29	0.45	0.21
Control Delay	10.6	11.4	14.8	11.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	11.4	14.8	11.8
Queue Length 50th (ft)	13	47	94	33
Queue Length 95th (ft)	28	75	136	56
Internal Link Dist (ft)	213	686	193	605
Turn Bay Length (ft)				
Base Capacity (vph)	1248	1371	1409	1270
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.10	0.29	0.45	0.21

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	565	15	0	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.996			
Flt Protected						
Satd. Flow (prot)	0	0	3525	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	0	3525	0	0	3539
Link Speed (mph)	30		30			30
Link Distance (ft)	329		351			273
Travel Time (s)	7.5		8.0			6.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	628	17	0	294
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	645	0	0	294
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	565	15	0	265
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	628	17	0	294
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						273
pX, platoon unblocked						
vC, conflicting volume	783	322			644	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	783	322			644	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	330	673			937	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	419	226	147	147
Volume Left	0	0	0	0
Volume Right	0	17	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.25	0.13	0.09	0.09
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS				
Approach Delay (s)	0.0		0.0	
Approach LOS				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	19.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	5	65	20	30	30	5	295	15	15	730	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.891			0.949			0.993			0.991	
Flt Protected		0.994			0.988			0.999			0.999	
Satd. Flow (prot)	0	1650	0	0	1713	0	0	3347	0	0	5034	0
Flt Permitted		0.967			0.902			0.944			0.932	
Satd. Flow (perm)	0	1605	0	0	1564	0	0	3163	0	0	4697	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			33			13			23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		433			549			728			701	
Travel Time (s)		9.8			12.5			16.5			15.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	11	6	72	22	33	33	6	328	17	17	811	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	88	0	0	351	0	0	878	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.1			8.1			58.1			58.1	
Actuated g/C Ratio		0.11			0.11			0.81			0.81	
v/c Ratio		0.36			0.43			0.14			0.23	
Control Delay		14.5			25.8			2.2			2.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.5			25.8			2.2			2.3	
LOS		B			C			A			A	
Approach Delay		14.5			25.8			2.2			2.3	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 71.4
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 4.5 — Intersection LOS: A
Intersection Capacity Utilization 40.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 46: Delta Sonic & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	89	88	351	878
v/c Ratio	0.36	0.43	0.14	0.23
Control Delay	14.5	25.8	2.2	2.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.5	25.8	2.2	2.3
Queue Length 50th (ft)	7	23	13	26
Queue Length 95th (ft)	43	59	28	47
Internal Link Dist (ft)	353	469	648	621
Turn Bay Length (ft)				
Base Capacity (vph)	524	484	2574	3824
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.18	0.14	0.23

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	5	15	5	20	5	355	15	10	790	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.955			0.934			0.994			0.999	
Flt Protected		0.984			0.981			0.999			0.999	
Satd. Flow (prot)	0	1750	0	0	1658	0	0	3350	0	0	5075	0
Flt Permitted		0.919			0.868			0.946			0.935	
Satd. Flow (perm)	0	1635	0	0	1467	0	0	3172	0	0	4750	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			22			10			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			670			701			646	
Travel Time (s)		10.7			15.2			15.9			14.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	6	6	6	17	6	22	6	394	17	11	878	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	45	0	0	417	0	0	895	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.9			6.9			66.0			66.0	
Actuated g/C Ratio		0.09			0.09			0.88			0.88	
v/c Ratio		0.12			0.29			0.15			0.21	
Control Delay		27.0			25.1			1.5			1.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.0			25.1			1.5			1.6	
LOS		C			C			A			A	
Approach Delay		27.0			25.1			1.5			1.6	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.1
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.29
Intersection Signal Delay: 2.7 — Intersection LOS: A
Intersection Capacity Utilization 32.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 48: Enterprise & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	18	45	417	895
v/c Ratio	0.12	0.29	0.15	0.21
Control Delay	27.0	25.1	1.5	1.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.0	25.1	1.5	1.6
Queue Length 50th (ft)	6	11	14	24
Queue Length 95th (ft)	23	38	28	41
Internal Link Dist (ft)	389	590	621	566
Turn Bay Length (ft)				
Base Capacity (vph)	463	428	2787	4172
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.11	0.15	0.21

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	45	45	30	95	25	45	300	40	30	700	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.951			0.977			0.985			0.977	
Flt Protected		0.986			0.990			0.994			0.998	
Satd. Flow (prot)	0	1681	0	0	1686	0	0	3273	0	0	4910	0
Flt Permitted		0.847			0.926			0.793			0.916	
Satd. Flow (perm)	0	1444	0	0	1577	0	0	2611	0	0	4507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			12			30			92	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		680			925			646			1583	
Travel Time (s)		15.5			21.0			14.7			36.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	9%	9%	9%	8%	8%	8%	3%	3%	3%
Adj. Flow (vph)	39	50	50	33	106	28	50	333	44	33	778	150
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	167	0	0	427	0	0	961	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		12.6			12.6			54.1			54.1	
Actuated g/C Ratio		0.17			0.17			0.72			0.72	
v/c Ratio		0.51			0.61			0.22			0.29	
Control Delay		26.9			35.3			3.9			3.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.9			35.3			3.9			3.8	
LOS		C			D			A			A	
Approach Delay		26.9			35.3			3.9			3.8	
Approach LOS		C			D			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 74.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 8.8 — Intersection LOS: A
Intersection Capacity Utilization 48.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 50: Utica & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	139	167	427	961
v/c Ratio	0.51	0.61	0.22	0.29
Control Delay	26.9	35.3	3.9	3.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.9	35.3	3.9	3.8
Queue Length 50th (ft)	42	63	24	39
Queue Length 95th (ft)	92	120	52	72
Internal Link Dist (ft)	600	845	566	1503
Turn Bay Length (ft)				
Base Capacity (vph)	431	453	1900	3291
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.37	0.22	0.29

Intersection Summary

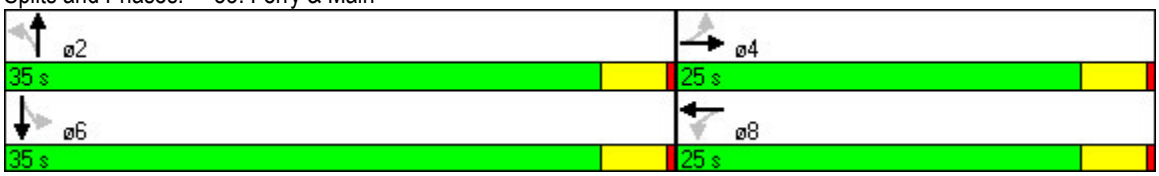
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	145	130	95	165	5	45	265	40	5	645	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.949			0.997			0.983			0.988	
Flt Protected		0.986			0.982			0.994				
Satd. Flow (prot)	0	3217	0	0	3303	0	0	3236	0	0	4975	0
Flt Permitted		0.782			0.675			0.826			0.938	
Satd. Flow (perm)	0	2551	0	0	2271	0	0	2689	0	0	4667	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		144			4			34			34	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1430			1674			1583			565	
Travel Time (s)		32.5			38.0			36.0			12.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	9%	9%	9%	3%	3%	3%
Adj. Flow (vph)	117	161	144	106	183	6	50	294	44	6	717	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	422	0	0	295	0	0	388	0	0	784	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		11.5			11.5			31.1			31.1	
Actuated g/C Ratio		0.23			0.23			0.61			0.61	
v/c Ratio		0.61			0.57			0.23			0.27	
Control Delay		15.2			21.6			5.0			5.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.2			21.6			5.0			5.0	
LOS		B			C			A			A	
Approach Delay		15.2			21.6			5.0			5.0	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 50.6
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 9.9 — Intersection LOS: A
Intersection Capacity Utilization 55.7% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 53: Ferry & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	422	295	388	784
v/c Ratio	0.61	0.57	0.23	0.27
Control Delay	15.2	21.6	5.0	5.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.2	21.6	5.0	5.0
Queue Length 50th (ft)	37	40	19	30
Queue Length 95th (ft)	72	71	47	61
Internal Link Dist (ft)	1350	1594	1503	485
Turn Bay Length (ft)				
Base Capacity (vph)	1147	949	1667	2883
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.31	0.23	0.27

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	10	20	130	190	315	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910				0.983	
Flt Protected	0.984			0.980		
Satd. Flow (prot)	1668	0	0	1825	1831	0
Flt Permitted	0.984			0.980		
Satd. Flow (perm)	1668	0	0	1825	1831	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1107			363	330	
Travel Time (s)	25.2			8.3	7.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	22	144	211	350	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	0	0	355	400	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	20	130	190	315	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	22	144	211	350	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				363	330	
pX, platoon unblocked						
vC, conflicting volume	875	375	400			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	875	375	400			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	97	88			
cM capacity (veh/h)	280	671	1159			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	33	356	400
Volume Left	11	144	0
Volume Right	22	0	50
cSH	458	1159	1700
Volume to Capacity	0.07	0.12	0.24
Queue Length 95th (ft)	6	11	0
Control Delay (s)	13.5	4.2	0.0
Lane LOS	B	A	
Approach Delay (s)	13.5	4.2	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	10	5	255	90	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955				0.992	
Flt Protected	0.968			0.999		
Satd. Flow (prot)	1722	0	0	1861	1848	0
Flt Permitted	0.968			0.999		
Satd. Flow (perm)	1722	0	0	1861	1848	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	326			293	365	
Travel Time (s)	7.4			6.7	8.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	11	6	283	100	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	0	0	289	106	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 27.4%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	10	5	255	90	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	11	6	283	100	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					365	
pX, platoon unblocked						
vC, conflicting volume	397	103	106			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	397	103	106			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	96	99	100			
cM capacity (veh/h)	606	952	1486			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	33	289	106
Volume Left	22	6	0
Volume Right	11	0	6
cSH	689	1486	1700
Volume to Capacity	0.05	0.00	0.06
Queue Length 95th (ft)	4	0	0
Control Delay (s)	10.5	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	10.5	0.2	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	0	0	0	1920	540	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	6408	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	6408	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	339			382	585	
Travel Time (s)	7.7			8.7	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	2133	600	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	2133	600	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 72.8%		ICU Level of Service C	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	1920	540	0
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)	0	0	0	2133	600	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)	339			382		
pX, platoon unblocked					0.71	
vC, conflicting volume			0		533	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
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		18	100
cM capacity (veh/h)			1622		730	1084

Direction, Lane #	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	533	533	533	533	300	300
Volume Left	0	0	0	0	300	300
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	730	730
Volume to Capacity	0.31	0.31	0.31	0.31	0.41	0.41
Queue Length 95th (ft)	0	0	0	0	50	50
Control Delay (s)	0.0	0.0	0.0	0.0	13.3	13.3
Lane LOS					B	B
Approach Delay (s)	0.0				13.3	
Approach LOS					B	

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	125	2185	175	0	0	0	0	40	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.989						0.955	
Flt Protected					0.997							
Satd. Flow (prot)	0	0	0	0	6318	0	0	0	0	0	1779	0
Flt Permitted					0.997							
Satd. Flow (perm)	0	0	0	0	6318	0	0	0	0	0	1779	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					56						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	139	2428	194	0	0	0	0	44	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2761	0	0	0	0	0	66	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.4	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.5	50.5						25.6	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.2	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.4	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					51.5						26.6	
Actuated g/C Ratio					0.61						0.31	
v/c Ratio					0.72						0.12	
Control Delay					12.7						20.6	
Queue Delay					0.0						0.0	
Total Delay					12.7						20.6	
LOS					B						C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					12.7						20.6	
Approach LOS					B						C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.9	Intersection LOS: B
Intersection Capacity Utilization 46.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 66: Goodell & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	2761	66
v/c Ratio	0.72	0.12
Control Delay	12.7	20.6
Queue Delay	0.0	0.0
Total Delay	12.7	20.6
Queue Length 50th (ft)	265	23
Queue Length 95th (ft)	308	53
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3850	559
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.72	0.12

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	70	15	35	70	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.976				0.894	
Flt Protected				0.984	0.989	
Satd. Flow (prot)	1818	0	0	1833	1647	0
Flt Permitted				0.984	0.989	
Satd. Flow (perm)	1818	0	0	1833	1647	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	293			342	355	
Travel Time (s)	6.7			7.8	8.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	17	39	78	6	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	95	0	0	117	28	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 22.3%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	70	15	35	70	5	20
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)	78	17	39	78	6	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	293			342		
pX, platoon unblocked						
vC, conflicting volume			94		242	86
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			94		242	86
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		99	98
cM capacity (veh/h)			1500		727	973

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	94	117	28
Volume Left	0	39	6
Volume Right	17	0	22
cSH	1700	1500	911
Volume to Capacity	0.06	0.03	0.03
Queue Length 95th (ft)	0	2	2
Control Delay (s)	0.0	2.6	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	2.6	9.1
Approach LOS			A

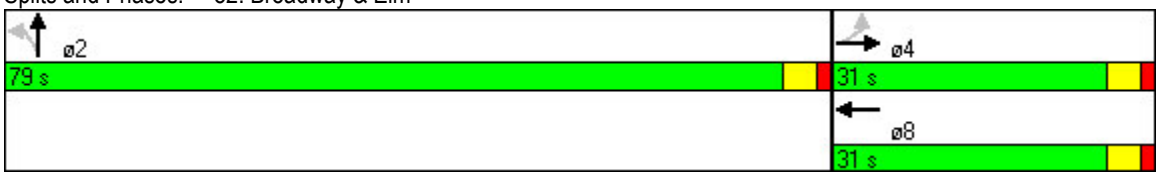
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	22.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	70	0	0	230	25	140	2030	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.985			0.996				
Flt Protected		0.982						0.997				
Satd. Flow (prot)	0	3476	0	0	3486	0	0	5050	0	0	0	0
Flt Permitted		0.784						0.997				
Satd. Flow (perm)	0	2775	0	0	3486	0	0	5050	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			219			461			734	
Travel Time (s)		9.5			5.0			10.5			16.7	
Peak Hour Factor	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)	44	78	0	0	256	28	156	2256	67	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	284	0	0	2479	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	23.0	23.0			23.0		41.0	41.0				
Total Split (s)	31.0	31.0	0.0	0.0	31.0	0.0	79.0	79.0	0.0	0.0	0.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	0.0%	28.2%	0.0%	71.8%	71.8%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	26.3	26.3			26.3		74.3	74.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		27.3			27.3			75.3				
Actuated g/C Ratio		0.25			0.25			0.68				
v/c Ratio		0.18			0.33			0.72				
Control Delay		33.4			33.8			2.5				
Queue Delay		0.0			0.0			0.1				
Total Delay		33.4			33.8			2.6				
LOS		C			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		33.4			33.8			2.6				
Approach LOS		C			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 41 (37%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 63.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 82: Broadway & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	122	284	2479
v/c Ratio	0.18	0.33	0.72
Control Delay	33.4	33.8	2.5
Queue Delay	0.0	0.0	0.1
Total Delay	33.4	33.8	2.6
Queue Length 50th (ft)	35	83	37
Queue Length 95th (ft)	61	123	38
Internal Link Dist (ft)	339	139	381
Turn Bay Length (ft)			
Base Capacity (vph)	689	873	3459
Starvation Cap Reductn	0	0	154
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.18	0.33	0.75

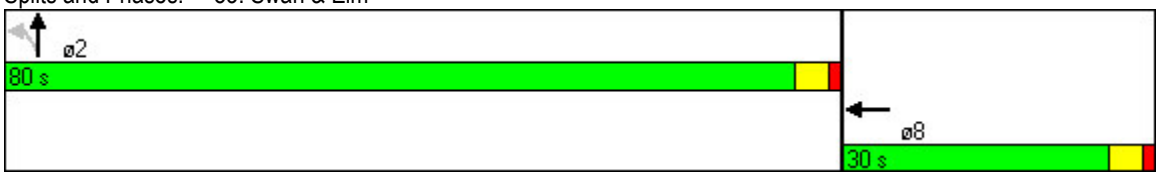
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	200	105	495	2815	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.91	1.00	1.00	1.00
Frt					0.957			0.997				
Flt Protected							0.950	0.999				
Satd. Flow (prot)	0	0	0	0	1818	0	1552	4882	0	0	0	0
Flt Permitted							0.950	0.999				
Satd. Flow (perm)	0	0	0	0	1818	0	1552	4882	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					1		250	10				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			208			801			316	
Travel Time (s)		8.2			4.7			18.2			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.71	0.81	0.76	0.81	0.88	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	0	0	282	130	651	3475	62	0	0	0
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	0	0	0	0	412	0	586	3602	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					21.0		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	80.0	80.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	27.3%	0.0%	72.7%	72.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		75.4	75.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					20		22	22				
Act Effct Green (s)					27.4		77.4	77.4				
Actuated g/C Ratio					0.25		0.70	0.70				
v/c Ratio					0.91		0.50	1.05				
Control Delay					65.5		5.5	47.4				
Queue Delay					0.0		0.0	1.6				
Total Delay					65.5		5.5	49.0				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E		A	D				
Approach Delay					65.5			42.9				
Approach LOS					E			D				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green, Master Intersection	
Natural Cycle: 100	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 44.9	Intersection LOS: D
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 83: Swan & Elm



Lane Group	WBT	NBL	NBT
Lane Group Flow (vph)	412	586	3602
v/c Ratio	0.91	0.50	1.05
Control Delay	65.5	5.5	47.4
Queue Delay	0.0	0.0	1.6
Total Delay	65.5	5.5	49.0
Queue Length 50th (ft)	283	96	~1075
Queue Length 95th (ft)	297	111	781
Internal Link Dist (ft)	128		721
Turn Bay Length (ft)			
Base Capacity (vph)	454	1166	3438
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	13
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.91	0.50	1.05

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	80	0	60	270	0	0	0	0	50	1790	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt											0.977	
Flt Protected					0.991						0.999	
Satd. Flow (prot)	0	3539	0	0	3507	0	0	0	0	0	4963	0
Flt Permitted					0.884						0.999	
Satd. Flow (perm)	0	3539	0	0	3129	0	0	0	0	0	4963	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											75	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			419			255			685	
Travel Time (s)		5.1			9.5			5.8			15.6	
Peak Hour Factor	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)	0	89	0	67	300	0	0	0	0	56	1989	372
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	367	0	0	0	0	0	2417	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		24.0		24.0	24.0					41.0	41.0	
Total Split (s)	0.0	31.0	0.0	31.0	31.0	0.0	0.0	0.0	0.0	49.0	49.0	0.0
Total Split (%)	0.0%	38.8%	0.0%	38.8%	38.8%	0.0%	0.0%	0.0%	0.0%	61.3%	61.3%	0.0%
Maximum Green (s)		26.3		26.3	26.3					44.3	44.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		27.3			27.3						45.3	
Actuated g/C Ratio		0.34			0.34						0.57	
v/c Ratio		0.07			0.34						0.85	
Control Delay		18.1			20.8						7.8	
Queue Delay		0.0			0.0						0.0	
Total Delay		18.1			20.8						7.8	
LOS		B			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.1			20.8						7.8	
Approach LOS		B			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 39 (49%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 62.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 84: Broadway & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	89	367	2417
v/c Ratio	0.07	0.34	0.85
Control Delay	18.1	20.8	7.8
Queue Delay	0.0	0.0	0.0
Total Delay	18.1	20.8	7.8
Queue Length 50th (ft)	15	71	83
Queue Length 95th (ft)	31	106	95
Internal Link Dist (ft)	146	339	605
Turn Bay Length (ft)			
Base Capacity (vph)	1208	1068	2843
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.07	0.34	0.85

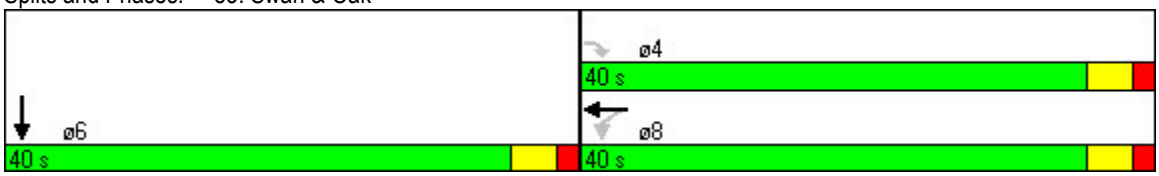
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	35	85	675	0	0	0	0	0	1095	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.86	0.86
Frt			0.850								0.992	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			50	29							18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			359			115			332	
Travel Time (s)		8.0			8.2			2.6			7.5	
Peak Hour Factor	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)	0	0	39	94	750	0	0	0	0	0	1217	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	39	94	750	0	0	0	0	0	1284	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			custom	Perm								
Protected Phases					8						6	
Permitted Phases			4	8								
Minimum Split (s)			20.8	20.8	20.8						40.0	
Total Split (s)	0.0	0.0	40.0	40.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Total Split (%)	0.0%	0.0%	50.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
Maximum Green (s)			35.2	35.2	35.2						35.2	
Yellow Time (s)			3.2	3.2	3.2						3.2	
All-Red Time (s)			1.6	1.6	1.6						1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.8	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)			5.0	5.0	5.0						5.0	
Flash Dont Walk (s)			11.0	11.0	11.0						11.0	
Pedestrian Calls (#/hr)			0	0	0						0	
Act Effct Green (s)			36.2	36.2	36.2						36.2	
Actuated g/C Ratio			0.45	0.45	0.45						0.45	
v/c Ratio			0.03	0.12	0.47						0.44	
Control Delay			3.2	9.6	16.4						12.7	
Queue Delay			0.0	0.0	0.6						0.0	
Total Delay			3.2	9.6	17.1						12.7	
LOS			A	A	B						B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					16.2						12.7	
Approach LOS					B						B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 75 (94%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 72.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 85: Swan & Oak



Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	39	94	750	1284
v/c Ratio	0.03	0.12	0.47	0.44
Control Delay	3.2	9.6	16.4	12.7
Queue Delay	0.0	0.0	0.6	0.0
Total Delay	3.2	9.6	17.1	12.7
Queue Length 50th (ft)	0	18	131	66
Queue Length 95th (ft)	7	44	178	96
Internal Link Dist (ft)			279	252
Turn Bay Length (ft)				
Base Capacity (vph)	1288	817	1601	2886
Starvation Cap Reductn	0	0	467	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.66	0.44

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	65	45	40	185	0	0	0	0	50	2085	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.945									0.993	
Flt Protected					0.991						0.999	
Satd. Flow (prot)	0	1760	0	0	1846	0	0	0	0	0	5045	0
Flt Permitted					0.929						0.999	
Satd. Flow (perm)	0	1760	0	0	1730	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9									20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			458			685			413	
Travel Time (s)		10.0			10.4			15.6			9.4	
Peak Hour Factor	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)	0	72	50	44	206	0	0	0	0	56	2317	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	250	0	0	0	0	0	2490	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	23.0	0.0	23.0	23.0	0.0	0.0	0.0	0.0	57.0	57.0	0.0
Total Split (%)	0.0%	28.8%	0.0%	28.8%	28.8%	0.0%	0.0%	0.0%	0.0%	71.3%	71.3%	0.0%
Maximum Green (s)		18.3		18.3	18.3					52.3	52.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		19.3			19.3						53.3	
Actuated g/C Ratio		0.24			0.24						0.67	
v/c Ratio		0.28			0.60						0.74	
Control Delay		25.0			33.9						6.0	
Queue Delay		0.0			0.0						0.0	
Total Delay		25.0			33.9						6.0	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		25.0			33.9						6.0	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 29 (36%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 86: Huron & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	122	250	2490
v/c Ratio	0.28	0.60	0.74
Control Delay	25.0	33.9	6.0
Queue Delay	0.0	0.0	0.0
Total Delay	25.0	33.9	6.0
Queue Length 50th (ft)	46	111	41
Queue Length 95th (ft)	91	186	45
Internal Link Dist (ft)	360	378	333
Turn Bay Length (ft)			
Base Capacity (vph)	431	417	3368
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.28	0.60	0.74

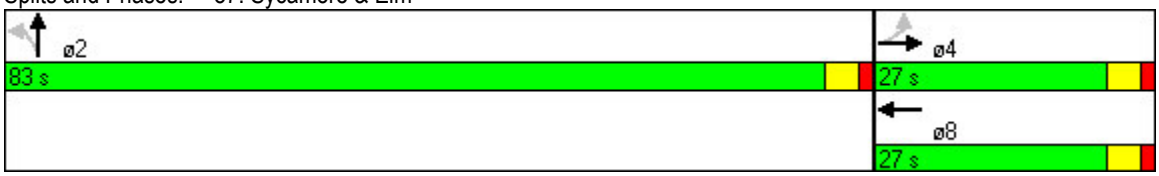
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	45	0	0	105	15	105	1945	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.983			0.997				
Flt Protected		0.977						0.997				
Satd. Flow (prot)	0	1820	0	0	1831	0	0	5055	0	0	0	0
Flt Permitted		0.824						0.997				
Satd. Flow (perm)	0	1535	0	0	1831	0	0	5055	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					6			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		458			256			734			337	
Travel Time (s)		10.4			5.8			16.7			7.7	
Peak Hour Factor	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)	44	50	0	0	117	17	117	2161	50	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	94	0	0	134	0	0	2328	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.7	20.7			20.7		45.0	45.0				
Total Split (s)	27.0	27.0	0.0	0.0	27.0	0.0	83.0	83.0	0.0	0.0	0.0	0.0
Total Split (%)	24.5%	24.5%	0.0%	0.0%	24.5%	0.0%	75.5%	75.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	22.3	22.3			22.3		78.3	78.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		23.3			23.3			79.3				
Actuated g/C Ratio		0.21			0.21			0.72				
v/c Ratio		0.29			0.34			0.64				
Control Delay		39.3			38.0			2.4				
Queue Delay		0.0			0.0			0.2				
Total Delay		39.3			38.0			2.6				
LOS		D			D			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		39.3			38.0			2.6				
Approach LOS		D			D			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 64 (58%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 5.8	Intersection LOS: A
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 87: Sycamore & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	94	134	2328
v/c Ratio	0.29	0.34	0.64
Control Delay	39.3	38.0	2.4
Queue Delay	0.0	0.0	0.2
Total Delay	39.3	38.0	2.6
Queue Length 50th (ft)	56	77	39
Queue Length 95th (ft)	105	135	43
Internal Link Dist (ft)	378	176	654
Turn Bay Length (ft)			
Base Capacity (vph)	325	393	3646
Starvation Cap Reductn	0	0	496
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.29	0.34	0.74

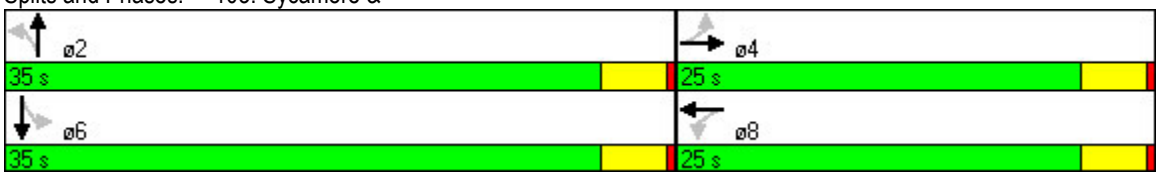
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	45	15	15	65	25	30	525	25	15	255	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.976			0.968			0.993			0.990	
Flt Protected		0.985			0.993			0.997			0.997	
Satd. Flow (prot)	0	1723	0	0	1691	0	0	3470	0	0	3394	0
Flt Permitted		0.915			0.964			0.928			0.920	
Satd. Flow (perm)	0	1601	0	0	1642	0	0	3230	0	0	3131	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			28			11			19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			600			803			878	
Travel Time (s)		5.1			13.6			18.3			20.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	8%	8%	8%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	28	50	17	17	72	28	33	583	28	17	283	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	117	0	0	644	0	0	322	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.17			0.20			0.38			0.20	
Control Delay		12.5			11.8			7.1			7.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.5			11.8			7.1			7.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		12.5			11.8			7.1			7.7	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 42.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: Sycamore &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	95	117	644	322
v/c Ratio	0.17	0.20	0.38	0.20
Control Delay	12.5	11.8	7.1	7.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.5	11.8	7.1	7.7
Queue Length 50th (ft)	19	22	49	28
Queue Length 95th (ft)	47	53	66	47
Internal Link Dist (ft)	146	520	723	798
Turn Bay Length (ft)				
Base Capacity (vph)	571	593	1674	1627
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.20	0.38	0.20

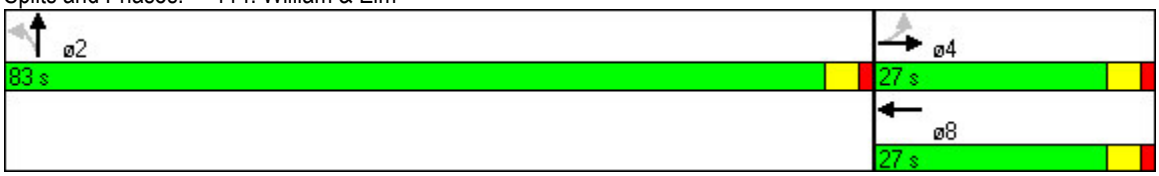
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	55	0	0	200	35	165	2205	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.978			0.999				
Flt Protected		0.996						0.997				
Satd. Flow (prot)	0	3525	0	0	3461	0	0	5065	0	0	0	0
Flt Permitted		0.927						0.997				
Satd. Flow (perm)	0	3281	0	0	3461	0	0	5065	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					10			3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		371			191			308			461	
Travel Time (s)		8.4			4.3			7.0			10.5	
Peak Hour Factor	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)	6	61	0	0	222	39	183	2450	22	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	261	0	0	2655	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	27.0	27.0	0.0	0.0	27.0	0.0	83.0	83.0	0.0	0.0	0.0	0.0
Total Split (%)	24.5%	24.5%	0.0%	0.0%	24.5%	0.0%	75.5%	75.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	22.3	22.3			22.3		78.3	78.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		23.3			23.3			79.3				
Actuated g/C Ratio		0.21			0.21			0.72				
v/c Ratio		0.10			0.35			0.73				
Control Delay		35.4			37.0			2.5				
Queue Delay		0.0			0.0			0.2				
Total Delay		35.4			37.0			2.7				
LOS		D			D			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.4			37.0			2.7				
Approach LOS		D			D			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 35 (32%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 59.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 114: William & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	67	261	2655
v/c Ratio	0.10	0.35	0.73
Control Delay	35.4	37.0	2.5
Queue Delay	0.0	0.0	0.2
Total Delay	35.4	37.0	2.7
Queue Length 50th (ft)	20	80	28
Queue Length 95th (ft)	40	119	31
Internal Link Dist (ft)	291	111	228
Turn Bay Length (ft)			
Base Capacity (vph)	695	741	3652
Starvation Cap Reductn	0	0	276
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.10	0.35	0.79

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	35	10	40	250	0	0	0	0	80	1820	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.967										
Flt Protected					0.993						0.998	
Satd. Flow (prot)	0	3422	0	0	3514	0	0	0	0	0	5075	0
Flt Permitted					0.911						0.998	
Satd. Flow (perm)	0	3422	0	0	3224	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		507			371			297			255	
Travel Time (s)		11.5			8.4			6.8			5.8	
Peak Hour Factor	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)	0	39	11	44	278	0	0	0	0	89	2022	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	322	0	0	0	0	0	2117	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	25.0	0.0	25.0	25.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	31.3%	0.0%	31.3%	31.3%	0.0%	0.0%	0.0%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)		20.3		20.3	20.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		21.3			21.3						51.3	
Actuated g/C Ratio		0.27			0.27						0.64	
v/c Ratio		0.05			0.38						0.65	
Control Delay		18.4			25.5						1.6	
Queue Delay		0.0			0.0						0.7	
Total Delay		18.4			25.5						2.3	
LOS		B			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.4			25.5						2.3	
Approach LOS		B			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 45 (56%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 54.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 115: William & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	50	322	2117
v/c Ratio	0.05	0.38	0.65
Control Delay	18.4	25.5	1.6
Queue Delay	0.0	0.0	0.7
Total Delay	18.4	25.5	2.3
Queue Length 50th (ft)	7	68	17
Queue Length 95th (ft)	20	105	20
Internal Link Dist (ft)	427	291	175
Turn Bay Length (ft)			
Base Capacity (vph)	919	858	3255
Starvation Cap Reductn	0	0	715
Spillback Cap Reductn	0	0	10
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.05	0.38	0.83

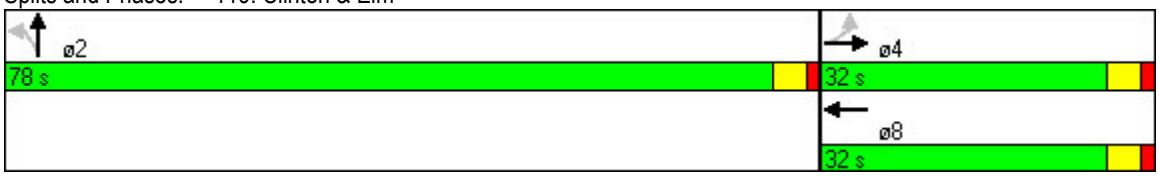
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	90	0	0	95	40	20	2370	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.951			0.997				
Flt Protected		0.988						0.999				
Satd. Flow (prot)	0	1836	0	0	1807	0	0	5021	0	0	0	0
Flt Permitted		0.894						0.999				
Satd. Flow (perm)	0	1661	0	0	1807	0	0	5021	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					7			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			191			734			308	
Travel Time (s)		8.2			4.3			16.7			7.0	
Peak Hour Factor	0.68	0.78	0.90	0.90	0.73	0.54	0.58	0.94	0.58	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	2%	2%	0%	0%	0%	3%	0%	2%	2%	2%
Adj. Flow (vph)	37	115	0	0	130	74	34	2521	60	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	0	0	204	0	0	2615	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	32.0	32.0			21.2		48.0	48.0				
Total Split (s)	32.0	32.0	0.0	0.0	32.0	0.0	78.0	78.0	0.0	0.0	0.0	0.0
Total Split (%)	29.1%	29.1%	0.0%	0.0%	29.1%	0.0%	70.9%	70.9%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	27.3	27.3			27.3		73.3	73.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.7	2.7	3.0	3.0	2.7	3.0	2.7	2.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			75.3				
Actuated g/C Ratio		0.27			0.27			0.68				
v/c Ratio		0.34			0.42			0.76				
Control Delay		35.3			35.3			2.3				
Queue Delay		0.0			0.0			0.1				
Total Delay		35.3			35.3			2.5				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D			D			A				
Approach Delay		35.3			35.3			2.5				
Approach LOS		D			D			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 28 (25%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 70.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 119: Clinton & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	152	204	2615
v/c Ratio	0.34	0.42	0.76
Control Delay	35.3	35.3	2.3
Queue Delay	0.0	0.0	0.1
Total Delay	35.3	35.3	2.5
Queue Length 50th (ft)	87	115	26
Queue Length 95th (ft)	124	144	27
Internal Link Dist (ft)	279	111	654
Turn Bay Length (ft)			
Base Capacity (vph)	442	486	3439
Starvation Cap Reductn	0	0	142
Spillback Cap Reductn	0	0	79
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.34	0.42	0.79

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	80	40	30	120	0	0	0	0	45	1720	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.955									0.993	
Flt Protected					0.990						0.999	
Satd. Flow (prot)	0	1779	0	0	1844	0	0	0	0	0	5045	0
Flt Permitted					0.932						0.999	
Satd. Flow (perm)	0	1779	0	0	1736	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9									15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		520			359			762			297	
Travel Time (s)		11.8			8.2			17.3			6.8	
Peak Hour Factor	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)	0	89	44	33	133	0	0	0	0	50	1911	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	166	0	0	0	0	0	2061	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					48.0	48.0	
Total Split (s)	0.0	32.0	0.0	32.0	32.0	0.0	0.0	0.0	0.0	48.0	48.0	0.0
Total Split (%)	0.0%	40.0%	0.0%	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	60.0%	60.0%	0.0%
Maximum Green (s)		27.3		27.3	27.3					43.3	43.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		28.3			28.3						44.3	
Actuated g/C Ratio		0.35			0.35						0.55	
v/c Ratio		0.21			0.27						0.74	
Control Delay		17.9			20.0						2.9	
Queue Delay		0.0			0.0						0.1	
Total Delay		17.9			20.0						3.0	
LOS		B			B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.9			20.0						3.0	
Approach LOS		B			B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 53 (66%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 120: Clinton & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	133	166	2061
v/c Ratio	0.21	0.27	0.74
Control Delay	17.9	20.0	2.9
Queue Delay	0.0	0.0	0.1
Total Delay	17.9	20.0	3.0
Queue Length 50th (ft)	42	58	13
Queue Length 95th (ft)	82	105	13
Internal Link Dist (ft)	440	279	217
Turn Bay Length (ft)			
Base Capacity (vph)	635	614	2800
Starvation Cap Reductn	0	0	75
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.21	0.27	0.76

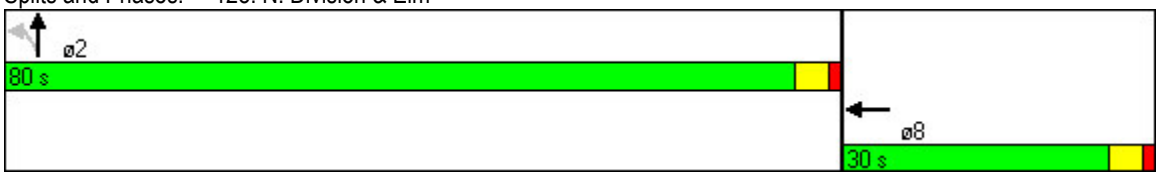
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	110	50	465	2240	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.953							
Flt Protected								0.991				
Satd. Flow (prot)	0	0	0	0	3373	0	0	5040	0	0	0	0
Flt Permitted								0.991				
Satd. Flow (perm)	0	0	0	0	3373	0	0	5040	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					8			95				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		349			195			317			734	
Travel Time (s)		7.9			4.4			7.2			16.7	
Peak Hour Factor	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)	0	0	0	0	122	56	517	2489	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	178	0	0	3006	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					20.6		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	80.0	80.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	27.3%	0.0%	72.7%	72.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		75.4	75.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					26.4			76.4				
Actuated g/C Ratio					0.24			0.69				
v/c Ratio					0.22			0.85				
Control Delay					32.8			5.6				
Queue Delay					0.0			1.0				
Total Delay					32.8			6.7				
LOS					C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					32.8			6.7				
Approach LOS					C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 10 (9%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 64.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 128: N. Division & Elm



Lane Group	WBT	NBT
Lane Group Flow (vph)	178	3006
v/c Ratio	0.22	0.85
Control Delay	32.8	5.6
Queue Delay	0.0	1.0
Total Delay	32.8	6.7
Queue Length 50th (ft)	51	98
Queue Length 95th (ft)	82	104
Internal Link Dist (ft)	115	237
Turn Bay Length (ft)		
Base Capacity (vph)	816	3530
Starvation Cap Reductn	0	275
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.22	0.92

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	20	430	0	0	0	0	0	1225	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.965	
Flt Protected					0.998							
Satd. Flow (prot)	0	0	0	0	5075	0	0	0	0	0	4907	0
Flt Permitted					0.998							
Satd. Flow (perm)	0	0	0	0	5075	0	0	0	0	0	4907	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					10						148	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			349			277			762	
Travel Time (s)		8.2			7.9			6.3			17.3	
Peak Hour Factor	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)	0	0	0	22	478	0	0	0	0	0	1361	411
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	500	0	0	0	0	0	1772	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.7	20.7						47.0	
Total Split (s)	0.0	0.0	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	47.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	41.3%	41.3%	0.0%	0.0%	0.0%	0.0%	0.0%	58.8%	0.0%
Maximum Green (s)				28.3	28.3						42.3	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.5	1.5						1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					29.3						43.3	
Actuated g/C Ratio					0.37						0.54	
v/c Ratio					0.27						0.65	
Control Delay					17.9						6.2	
Queue Delay					0.0						0.0	
Total Delay					17.9						6.2	
LOS					B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					17.9						6.2	
Approach LOS					B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 8.8	Intersection LOS: A
Intersection Capacity Utilization 47.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 129: N. Division & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	500	1772
v/c Ratio	0.27	0.65
Control Delay	17.9	6.2
Queue Delay	0.0	0.0
Total Delay	17.9	6.2
Queue Length 50th (ft)	61	194
Queue Length 95th (ft)	86	184
Internal Link Dist (ft)	269	682
Turn Bay Length (ft)		
Base Capacity (vph)	1865	2724
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.27	0.65

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	185	195	0	0	0	0	0	2820	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.998				
Flt Protected	0.950	0.988										
Satd. Flow (prot)	1610	3350	0	0	0	0	0	5075	0	0	0	0
Flt Permitted	0.950	0.988										
Satd. Flow (perm)	1610	3350	0	0	0	0	0	5075	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	3	3						5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			206			316			317	
Travel Time (s)		7.8			4.7			7.2			7.2	
Peak Hour Factor	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)	206	217	0	0	0	0	0	3133	44	0	0	0
Shared Lane Traffic (%)	33%											
Lane Group Flow (vph)	138	285	0	0	0	0	0	3177	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	21.0	21.0						50.0				
Total Split (s)	23.0	23.0	0.0	0.0	0.0	0.0	0.0	87.0	0.0	0.0	0.0	0.0
Total Split (%)	20.9%	20.9%	0.0%	0.0%	0.0%	0.0%	0.0%	79.1%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	18.4	18.4						82.4				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	1.4	1.4						1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	19.4	19.4						83.4				
Actuated g/C Ratio	0.18	0.18						0.76				
v/c Ratio	0.48	0.48						0.83				
Control Delay	46.3	43.4						0.9				
Queue Delay	0.0	0.0						10.9				
Total Delay	46.3	43.4						11.7				
LOS	D	D						B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		44.4						11.7				
Approach LOS		D						B				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 6 (5%), Referenced to phase 2:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 88.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 135: S Division & Elm

Lane Group	EBL	EBT	NBT
Lane Group Flow (vph)	138	285	3177
v/c Ratio	0.48	0.48	0.83
Control Delay	46.3	43.4	0.9
Queue Delay	0.0	0.0	10.9
Total Delay	46.3	43.4	11.7
Queue Length 50th (ft)	95	99	28
Queue Length 95th (ft)	165	145	m25
Internal Link Dist (ft)		265	236
Turn Bay Length (ft)			
Base Capacity (vph)	286	593	3849
Starvation Cap Reductn	0	0	705
Spillback Cap Reductn	0	0	127
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.48	0.48	1.01

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	215	75	0	0	0	0	0	0	165	1085	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									
Flt Protected											0.993	
Satd. Flow (prot)	0	5085	1583	0	0	0	0	0	0	0	6363	0
Flt Permitted											0.993	
Satd. Flow (perm)	0	5085	1583	0	0	0	0	0	0	0	6363	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			55								74	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		208			345			332			277	
Travel Time (s)		4.7			7.8			7.5			6.3	
Peak Hour Factor	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)	0	239	83	0	0	0	0	0	0	183	1206	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	239	83	0	0	0	0	0	0	0	1389	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		20.8	20.8							47.0	47.0	
Total Split (s)	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	47.0	47.0	0.0
Total Split (%)	0.0%	41.3%	41.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%
Maximum Green (s)		28.2	28.2							42.2	42.2	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.6	1.6							1.6	1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.0	3.8	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		29.2	29.2								43.2	
Actuated g/C Ratio		0.36	0.36								0.54	
v/c Ratio		0.13	0.14								0.40	
Control Delay		17.2	8.4								3.0	
Queue Delay		0.0	0.0								0.1	
Total Delay		17.2	8.4								3.1	
LOS		B	A								A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		14.9									3.1	
Approach LOS		B									A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 73 (91%), Referenced to phase 2: and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 5.3	Intersection LOS: A
Intersection Capacity Utilization 69.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 136: S Division & Oak

Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	239	83	1389
v/c Ratio	0.13	0.14	0.40
Control Delay	17.2	8.4	3.0
Queue Delay	0.0	0.0	0.1
Total Delay	17.2	8.4	3.1
Queue Length 50th (ft)	28	9	17
Queue Length 95th (ft)	45	37	31
Internal Link Dist (ft)	128		197
Turn Bay Length (ft)			
Base Capacity (vph)	1856	613	3470
Starvation Cap Reductn	0	0	876
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.13	0.14	0.54

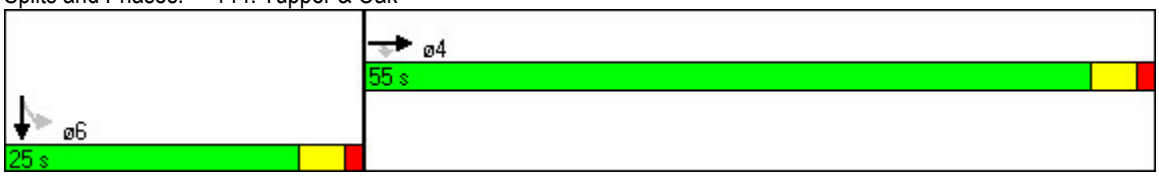
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	465	150	0	0	0	0	0	0	30	105	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									
Flt Protected											0.989	
Satd. Flow (prot)	0	3539	1583	0	0	0	0	0	0	0	3500	0
Flt Permitted											0.989	
Satd. Flow (perm)	0	3539	1583	0	0	0	0	0	0	0	3500	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			167								33	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		351			380			611			685	
Travel Time (s)		8.0			8.6			13.9			15.6	
Peak Hour Factor	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)	0	517	167	0	0	0	0	0	0	33	117	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	517	167	0	0	0	0	0	0	0	150	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		45.0	45.0							20.6	20.6	
Total Split (s)	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0
Total Split (%)	0.0%	68.8%	68.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%	31.3%	0.0%
Maximum Green (s)		50.4	50.4							20.4	20.4	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.4	1.4							1.4	1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		51.4	51.4								21.4	
Actuated g/C Ratio		0.64	0.64								0.27	
v/c Ratio		0.23	0.16								0.16	
Control Delay		3.3	0.6								17.9	
Queue Delay		0.0	0.0								0.0	
Total Delay		3.3	0.6								17.9	
LOS		A	A								B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.6									17.9	
Approach LOS		A									B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 52 (65%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 5.4	Intersection LOS: A
Intersection Capacity Utilization 35.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 144: Tupper & Oak



Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	517	167	150
v/c Ratio	0.23	0.16	0.16
Control Delay	3.3	0.6	17.9
Queue Delay	0.0	0.0	0.0
Total Delay	3.3	0.6	17.9
Queue Length 50th (ft)	14	0	23
Queue Length 95th (ft)	22	1	46
Internal Link Dist (ft)	271		605
Turn Bay Length (ft)			
Base Capacity (vph)	2274	1077	960
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.23	0.16	0.16

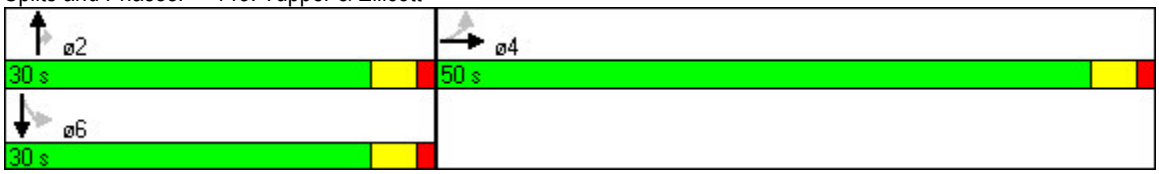
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	600	45	0	0	0	0	185	55	65	85	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor		1.00										
Frt		0.985						0.994	0.850			
Flt Protected		0.994									0.983	
Satd. Flow (prot)	0	4969	0	0	0	0	0	1743	1504	0	2684	0
Flt Permitted		0.994									0.761	
Satd. Flow (perm)	0	4967	0	0	0	0	0	1743	1504	0	2078	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40						3	74			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	120	714	90	0	0	0	0	210	82	94	170	0
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	0	924	0	0	0	0	0	218	74	0	264	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	50.0	50.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	37.5%	37.5%	37.5%	0.0%
Maximum Green (s)	45.4	45.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		47.4						27.4	27.4		27.4	
Actuated g/C Ratio		0.59						0.34	0.34		0.34	
v/c Ratio		0.31						0.36	0.13		0.37	
Control Delay		7.1						21.7	5.6		16.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0						0.0	0.0		0.0	
Total Delay		7.1						21.7	5.6		16.7	
LOS		A						C	A		B	
Approach Delay		7.1						17.6			16.7	
Approach LOS		A						B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 41 (51%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 10.9	Intersection LOS: B
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 145: Tupper & Ellicott



Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	924	218	74	264
v/c Ratio	0.31	0.36	0.13	0.37
Control Delay	7.1	21.7	5.6	16.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.1	21.7	5.6	16.7
Queue Length 50th (ft)	48	84	0	42
Queue Length 95th (ft)	60	140	13	40
Internal Link Dist (ft)	262	271		652
Turn Bay Length (ft)				
Base Capacity (vph)	2959	599	564	712
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.36	0.13	0.37

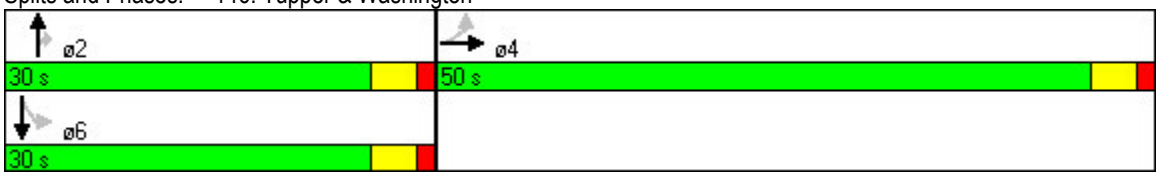
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	415	105	0	0	0	0	90	50	80	190	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964							0.850			
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	4955	0	0	0	0	0	1900	1615	1787	1863	0
Flt Permitted		0.998								0.663		
Satd. Flow (perm)	0	4955	0	0	0	0	0	1900	1615	1247	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157							53			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			342			356			718	
Travel Time (s)		6.5			7.8			8.1			16.3	
Peak Hour Factor	0.50	0.90	0.67	0.90	0.90	0.90	0.90	0.80	0.94	0.76	0.73	0.90
Heavy Vehicles (%)	0%	1%	0%	2%	2%	2%	2%	0%	0%	1%	2%	2%
Adj. Flow (vph)	30	461	157	0	0	0	0	112	53	105	260	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	648	0	0	0	0	0	112	53	105	260	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	50.0	50.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	37.5%	37.5%	37.5%	0.0%
Maximum Green (s)	45.4	45.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	3.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		47.4						27.4	26.4	27.4	27.4	
Actuated g/C Ratio		0.59						0.34	0.33	0.34	0.34	
v/c Ratio		0.22						0.17	0.09	0.25	0.41	
Control Delay		0.3						19.3	6.3	25.0	26.9	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		0.3						19.3	6.3	25.0	26.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A						B	A	C	C	
Approach Delay		0.3						15.1			26.3	
Approach LOS		A						B			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 34 (43%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 28.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 146: Tupper & Washington



Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	648	112	53	105	260
v/c Ratio	0.22	0.17	0.09	0.25	0.41
Control Delay	0.3	19.3	6.3	25.0	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.3	19.3	6.3	25.0	26.9
Queue Length 50th (ft)	0	38	0	42	110
Queue Length 95th (ft)	0	66	23	68	137
Internal Link Dist (ft)	208	276			638
Turn Bay Length (ft)					
Base Capacity (vph)	3000	651	568	427	638
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.17	0.09	0.25	0.41

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	480	0	0	0	0	0	555	5	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.999				
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3536	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3536	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								1				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		380			319			560			585	
Travel Time (s)		8.6			7.3			12.7			13.3	
Peak Hour Factor	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)	0	533	0	0	0	0	0	617	6	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	533	0	0	0	0	0	623	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type												
Protected Phases		4						2				
Permitted Phases												
Minimum Split (s)		45.0						21.2				
Total Split (s)	0.0	55.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	68.8%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)		49.8						19.8				
Yellow Time (s)		3.2						3.2				
All-Red Time (s)		2.0						2.0				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.2	3.0	3.0	3.0	3.0	3.0	4.2	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0						5.0				
Flash Dont Walk (s)		11.0						11.0				
Pedestrian Calls (#/hr)		0						0				
Act Effct Green (s)		50.8						20.8				
Actuated g/C Ratio		0.64						0.26				
v/c Ratio		0.24						0.68				
Control Delay		2.9						30.9				
Queue Delay		0.0						0.0				
Total Delay		2.9						30.9				
LOS		A						C				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.9						30.9				
Approach LOS		A						C				

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 52 (65%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 49.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 152: Tupper & Elm St

Lane Group	EBT	NBT
Lane Group Flow (vph)	533	623
v/c Ratio	0.24	0.68
Control Delay	2.9	30.9
Queue Delay	0.0	0.0
Total Delay	2.9	30.9
Queue Length 50th (ft)	17	146
Queue Length 95th (ft)	26	203
Internal Link Dist (ft)	300	480
Turn Bay Length (ft)		
Base Capacity (vph)	2247	920
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.24	0.68

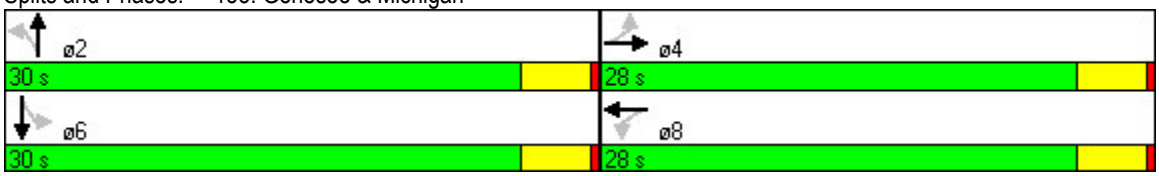
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	90	20	30	140	65	15	365	10	45	210	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.988			0.963			0.996			0.986	
Flt Protected		0.972			0.994			0.998			0.992	
Satd. Flow (prot)	0	3399	0	0	1783	0	0	3518	0	0	3462	0
Flt Permitted		0.698			0.942			0.940			0.855	
Satd. Flow (perm)	0	2441	0	0	1690	0	0	3314	0	0	2984	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			42			6			24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			1157			878			441	
Travel Time (s)		11.8			26.3			20.0			10.0	
Peak Hour Factor	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)	161	100	22	33	156	72	17	406	11	50	233	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	0	0	261	0	0	434	0	0	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	48.3%	48.3%	0.0%	48.3%	48.3%	0.0%	51.7%	51.7%	0.0%	51.7%	51.7%	0.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		25.0			25.0			27.0			27.0	
Actuated g/C Ratio		0.43			0.43			0.47			0.47	
v/c Ratio		0.27			0.35			0.28			0.22	
Control Delay		10.7			10.8			10.0			9.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.7			10.8			10.0			9.0	
LOS		B			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.7			10.8			10.0			9.0	
Approach LOS		B			B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 53.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 155: Genesee & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	283	261	434	311
v/c Ratio	0.27	0.35	0.28	0.22
Control Delay	10.7	10.8	10.0	9.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.7	10.8	10.0	9.0
Queue Length 50th (ft)	29	47	45	28
Queue Length 95th (ft)	52	93	71	50
Internal Link Dist (ft)	438	1077	798	361
Turn Bay Length (ft)				
Base Capacity (vph)	1063	752	1546	1402
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.35	0.28	0.22

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	655	645	210	75	20	290	340	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	0.850
Flt Protected		0.975				0.986		
Satd. Flow (prot)	0	4956	1538	0	0	1736	2760	1509
Flt Permitted		0.975				0.986		
Satd. Flow (perm)	0	4956	1538	0	0	1736	2760	1509
Right Turn on Red								Yes
Satd. Flow (RTOR)								106
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	809	741	228	106	32	354	378	106
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	1550	228	0	0	492	378	106
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	custom
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	6
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	25.0
Total Split (s)	55.0	55.0	55.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	68.8%	68.8%	68.8%	31.3%	31.3%	31.3%	31.3%	31.3%
Maximum Green (s)	50.4	50.4	50.4	20.4	20.4	20.4	20.4	20.4
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	4.1
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
Act Effct Green (s)		50.4	50.4			20.9	20.9	20.9
Actuated g/C Ratio		0.63	0.63			0.26	0.26	0.26
v/c Ratio		0.50	0.24			1.08	0.52	0.22
Control Delay		5.8	5.3			100.9	28.4	6.5
Queue Delay		0.1	0.4			0.0	0.0	0.0
Total Delay		5.9	5.7			100.9	28.4	6.5

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		A	A			F	C	A
Approach Delay		5.8				100.9		
Approach LOS		A				F		

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 45 (56%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 25.9	Intersection LOS: C
Intersection Capacity Utilization 79.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 159: Pearl & Main

Lane Group	WBT	WBR	NBT	SBR	SBR2
Lane Group Flow (vph)	1550	228	492	378	106
v/c Ratio	0.50	0.24	1.08	0.52	0.22
Control Delay	5.8	5.3	100.9	28.4	6.5
Queue Delay	0.1	0.4	0.0	0.0	0.0
Total Delay	5.9	5.7	100.9	28.4	6.5
Queue Length 50th (ft)	78	30	~284	92	0
Queue Length 95th (ft)	91	48	#405	138	15
Internal Link Dist (ft)	206		625		
Turn Bay Length (ft)					
Base Capacity (vph)	3122	969	454	721	473
Starvation Cap Reductn	480	367	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.38	1.08	0.52	0.22

Intersection Summary

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

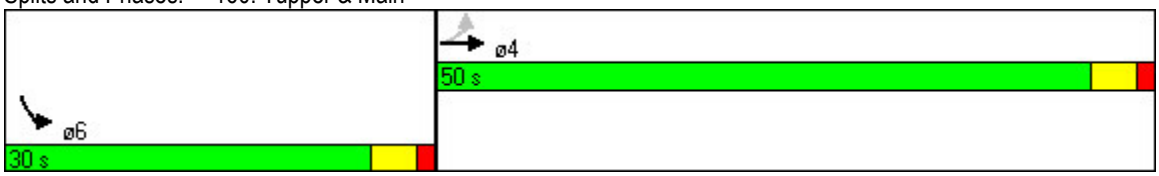
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	75	545	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.994				
Satd. Flow (prot)	0	5055	0	0	1863	0
Flt Permitted		0.994				
Satd. Flow (perm)	0	5055	0	0	1863	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		161	288		705	
Travel Time (s)		3.7	6.5		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	606	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	689	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm					
Protected Phases		4			6	
Permitted Phases	4					
Minimum Split (s)	40.0	40.0			20.6	
Total Split (s)	50.0	50.0	0.0	0.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	37.5%	0.0%
Maximum Green (s)	45.4	45.4			25.4	
Yellow Time (s)	3.2	3.2			3.2	
All-Red Time (s)	1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.6	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0	
Act Effct Green (s)		46.4				
Actuated g/C Ratio		0.58				
v/c Ratio		0.23				
Control Delay		8.4				
Queue Delay		0.0				
Total Delay		8.4				
LOS		A				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		8.4				
Approach LOS		A				

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 27 (34%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 15.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 160: Tupper & Main



Lane Group	EBT
Lane Group Flow (vph)	689
v/c Ratio	0.23
Control Delay	8.4
Queue Delay	0.0
Total Delay	8.4
Queue Length 50th (ft)	56
Queue Length 95th (ft)	75
Internal Link Dist (ft)	81
Turn Bay Length (ft)	
Base Capacity (vph)	2932
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.23

Intersection Summary

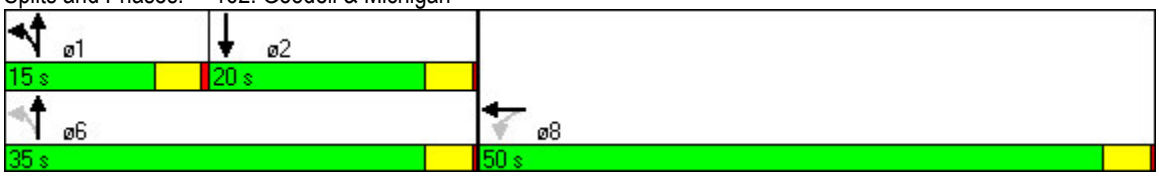
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	160	2125	415	90	490	0	0	225	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.977						0.971	
Flt Protected					0.997		0.950					
Satd. Flow (prot)	0	0	0	0	6242	0	1770	1863	0	0	3437	0
Flt Permitted					0.997		0.371					
Satd. Flow (perm)	0	0	0	0	6242	0	691	1863	0	0	3437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					86						31	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	178	2361	461	100	544	0	0	250	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	3000	0	100	544	0	0	311	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	15.0	50.0	0.0	0.0	20.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%	17.6%	58.8%	0.0%	0.0%	23.5%	0.0%
Maximum Green (s)				46.0	46.0		11.0				16.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	35.0
Total Split (%)	41%
Maximum Green (s)	31.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					47.0		32.0	32.0			17.0	
Actuated g/C Ratio					0.55		0.38	0.38			0.20	
v/c Ratio					0.86		0.24	0.78			0.44	
Control Delay					19.0		19.3	32.6			28.9	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					19.0		19.3	32.6			28.9	
LOS					B		B	C			C	
Approach Delay					19.0			30.5			28.9	
Approach LOS					B			C			C	

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 85	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 21.6	Intersection LOS: C
Intersection Capacity Utilization 72.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 162: Goodell & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	3000	100	544	311
v/c Ratio	0.86	0.24	0.78	0.44
Control Delay	19.0	19.3	32.6	28.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.0	19.3	32.6	28.9
Queue Length 50th (ft)	360	35	251	68
Queue Length 95th (ft)	418	68	#391	108
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	3490	412	701	712
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.86	0.24	0.78	0.44

Intersection Summary

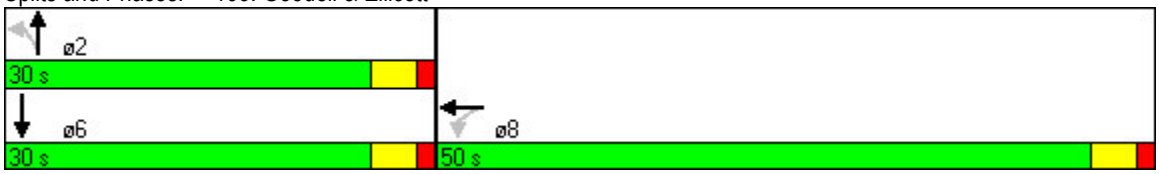
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	70	1710	330	50	155	0	0	105	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt					0.977						0.974	
Flt Protected					0.997			0.987				
Satd. Flow (prot)	0	0	0	0	6290	0	0	1856	0	0	1814	0
Flt Permitted					0.997			0.892				
Satd. Flow (perm)	0	0	0	0	6290	0	0	1677	0	0	1814	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					102						10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		326			375			732			791	
Travel Time (s)		7.4			8.5			16.6			18.0	
Confl. Peds. (#/hr)						3						
Peak Hour Factor	0.90	0.90	0.90	0.50	0.85	0.83	0.78	0.88	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	1%	0%	4%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	140	2012	398	64	176	0	0	117	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2550	0	0	240	0	0	145	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Minimum Split (s)				40.0	40.0		25.0	25.0			20.6	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	30.0	30.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	62.5%	62.5%	0.0%	37.5%	37.5%	0.0%	0.0%	37.5%	0.0%
Maximum Green (s)				45.4	45.4		25.4	25.4			25.4	
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)					47.4			27.4			26.4	
Actuated g/C Ratio					0.59			0.34			0.33	
v/c Ratio					0.68			0.42			0.24	
Control Delay					11.7			16.6			19.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					1.8			0.0			0.0	
Total Delay					13.5			16.6			19.4	
LOS					B			B			B	
Approach Delay					13.5			16.6			19.4	
Approach LOS					B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 46 (58%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 163: Goodell & Ellicott



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	2550	240	145
v/c Ratio	0.68	0.42	0.24
Control Delay	11.7	16.6	19.4
Queue Delay	1.8	0.0	0.0
Total Delay	13.5	16.6	19.4
Queue Length 50th (ft)	219	56	48
Queue Length 95th (ft)	232	86	92
Internal Link Dist (ft)	295	652	711
Turn Bay Length (ft)			
Base Capacity (vph)	3768	574	605
Starvation Cap Reductn	997	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.92	0.42	0.24

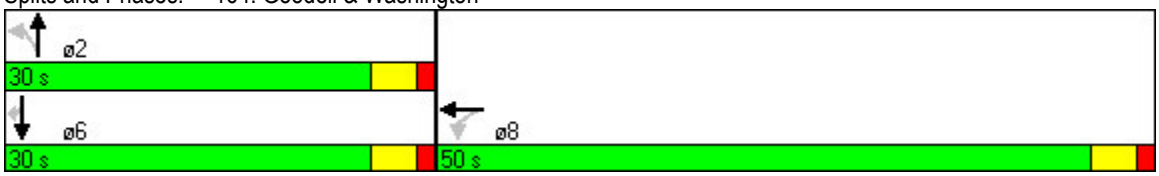
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	85	1000	45	60	135	0	0	95	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.994							0.850
Flt Protected					0.996			0.983				
Satd. Flow (prot)	0	0	0	0	6335	0	0	1771	0	0	1792	1429
Flt Permitted					0.996			0.869				
Satd. Flow (perm)	0	0	0	0	6335	0	0	1565	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					17							35
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	94	1124	50	80	150	0	0	109	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1268	0	0	230	0	0	109	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	30.0	30.0	0.0	0.0	30.0	30.0
Total Split (%)	0.0%	0.0%	0.0%	62.5%	62.5%	0.0%	37.5%	37.5%	0.0%	0.0%	37.5%	37.5%
Maximum Green (s)				45.4	45.4		25.4	25.4			25.4	25.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					47.4			27.4			27.4	27.4
Actuated g/C Ratio					0.59			0.34			0.34	0.34
v/c Ratio					0.34			0.43			0.18	0.07
Control Delay					1.4			18.2			19.4	7.0
Queue Delay					0.1			0.0			0.0	0.0
Total Delay					1.5			18.2			19.4	7.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			B			B	A
Approach Delay					1.5			18.2			16.4	
Approach LOS					A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 53 (66%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 5.2	Intersection LOS: A
Intersection Capacity Utilization 40.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 164: Goodell & Washington



Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	1268	230	109	35
v/c Ratio	0.34	0.43	0.18	0.07
Control Delay	1.4	18.2	19.4	7.0
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	1.5	18.2	19.4	7.0
Queue Length 50th (ft)	11	95	38	0
Queue Length 95th (ft)	13	161	71	7
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3760	536	614	512
Starvation Cap Reductn	1103	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.48	0.43	0.18	0.07

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	90	45	50	255	0	0	0	0	70	1830	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.950										0.850
Flt Protected					0.992						0.998	
Satd. Flow (prot)	0	3362	0	0	3511	0	0	0	0	0	5075	1583
Flt Permitted					0.877						0.998	
Satd. Flow (perm)	0	3362	0	0	3104	0	0	0	0	0	5075	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17										232
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			465			349			422	
Travel Time (s)		3.8			10.6			7.9			9.6	
Peak Hour Factor	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)	0	100	50	56	283	0	0	0	0	78	2033	389
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	339	0	0	0	0	0	2111	389
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Minimum Split (s)		20.9		20.9	20.9					47.0	47.0	47.0
Total Split (s)	0.0	23.0	0.0	23.0	23.0	0.0	0.0	0.0	0.0	57.0	57.0	57.0
Total Split (%)	0.0%	28.8%	0.0%	28.8%	28.8%	0.0%	0.0%	0.0%	0.0%	71.3%	71.3%	71.3%
Maximum Green (s)		18.1		18.1	18.1					52.1	52.1	52.1
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		1.7		1.7	1.7					1.7	1.7	1.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.9	3.0	3.9	3.9	3.0	3.0	3.0	3.0	3.9	3.9	3.9
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		19.1			19.1						53.1	53.1
Actuated g/C Ratio		0.24			0.24						0.66	0.66
v/c Ratio		0.18			0.46						0.63	0.34
Control Delay		22.1			28.4						8.9	3.2
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		22.1			28.4						8.9	3.2
LOS		C			C						A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.1			28.4						8.0	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 10 (13%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 312: Genesee & Oak

Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	150	339	2111	389
v/c Ratio	0.18	0.46	0.63	0.34
Control Delay	22.1	28.4	8.9	3.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.1	28.4	8.9	3.2
Queue Length 50th (ft)	27	76	194	27
Queue Length 95th (ft)	52	116	232	59
Internal Link Dist (ft)	89	385	342	
Turn Bay Length (ft)				
Base Capacity (vph)	816	741	3369	1129
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.46	0.63	0.34

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	120	0	0	120	20	160	1850	185	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.979				0.850			
Flt Protected		0.987						0.996				
Satd. Flow (prot)	0	3493	0	0	3465	0	0	5065	1583	0	0	0
Flt Permitted		0.836						0.996				
Satd. Flow (perm)	0	2959	0	0	3465	0	0	5065	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					16				206			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		465			518			495			260	
Travel Time (s)		10.6			11.8			11.3			5.9	
Peak Hour Factor	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)	50	133	0	0	133	22	178	2056	206	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	155	0	0	2234	206	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm		Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Minimum Split (s)	24.0	24.0			24.0		42.0	42.0	42.0			
Total Split (s)	29.0	29.0	0.0	0.0	29.0	0.0	81.0	81.0	81.0	0.0	0.0	0.0
Total Split (%)	26.4%	26.4%	0.0%	0.0%	26.4%	0.0%	73.6%	73.6%	73.6%	0.0%	0.0%	0.0%
Maximum Green (s)	24.2	24.2			24.2		76.2	76.2	76.2			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	1.6	1.6			1.6		1.6	1.6	1.6			
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.8	3.8	3.0	3.0	3.8	3.0	3.8	3.8	3.8	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)		25.2			25.2			77.2	77.2			
Actuated g/C Ratio		0.23			0.23			0.70	0.70			
v/c Ratio		0.27			0.19			0.63	0.18			
Control Delay		36.1			31.3			21.8	4.5			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		36.1			31.3			21.8	4.5			
LOS		D			C			C	A			
Approach Delay		36.1			31.3			20.3				
Approach LOS		D			C			C				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 1 (1%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 22.0	Intersection LOS: C
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 313: Genesee & Elm St

Lane Group	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	183	155	2234	206
v/c Ratio	0.27	0.19	0.63	0.18
Control Delay	36.1	31.3	21.8	4.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	36.1	31.3	21.8	4.5
Queue Length 50th (ft)	56	41	563	37
Queue Length 95th (ft)	88	70	628	66
Internal Link Dist (ft)	385	438	415	
Turn Bay Length (ft)				200
Base Capacity (vph)	678	806	3555	1172
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.19	0.63	0.18

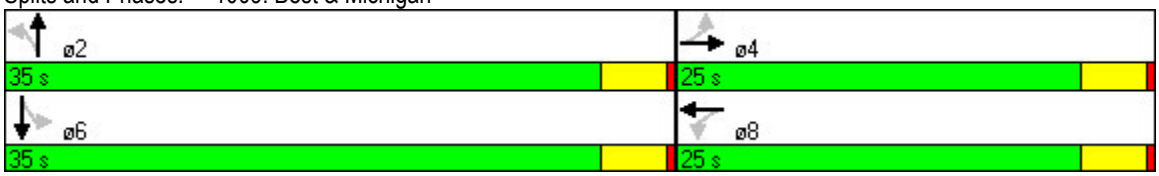
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	185	50	20	160	5	25	100	10	35	155	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.996			0.990			0.993	
Flt Protected		0.999			0.995			0.991			0.991	
Satd. Flow (prot)	0	1809	0	0	1846	0	0	1828	0	0	1833	0
Flt Permitted		0.994			0.957			0.936			0.943	
Satd. Flow (perm)	0	1800	0	0	1776	0	0	1726	0	0	1744	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			3			10			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			349			643			576	
Travel Time (s)		21.9			7.9			14.6			13.1	
Peak Hour Factor	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)	6	206	56	22	178	6	28	111	11	39	172	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	268	0	0	206	0	0	150	0	0	222	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
v/c Ratio		0.40			0.32			0.16			0.24	
Control Delay		14.9			15.1			7.2			8.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.9			15.1			7.2			8.1	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		14.9			15.1			7.2			8.1	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 40.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1009: Best & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	268	206	150	222
v/c Ratio	0.40	0.32	0.16	0.24
Control Delay	14.9	15.1	7.2	8.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.9	15.1	7.2	8.1
Queue Length 50th (ft)	63	51	23	38
Queue Length 95th (ft)	117	96	48	70
Internal Link Dist (ft)	884	269	563	496
Turn Bay Length (ft)				
Base Capacity (vph)	676	653	925	933
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.40	0.32	0.16	0.24

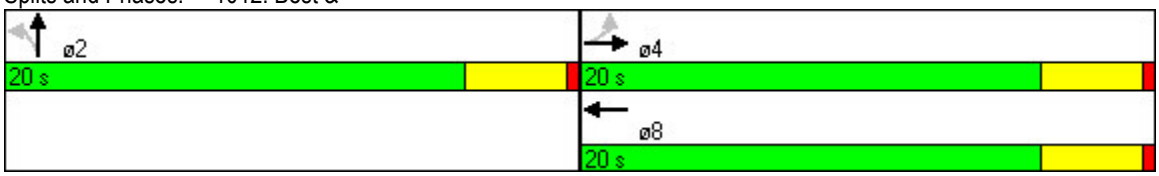
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	130	0	0	135	30	35	35	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.976			0.960				
Flt Protected		0.998						0.982				
Satd. Flow (prot)	0	1859	0	0	1818	0	0	3336	0	0	0	0
Flt Permitted		0.990						0.982				
Satd. Flow (perm)	0	1844	0	0	1818	0	0	3336	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					33			28				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		178			964			653			187	
Travel Time (s)		4.0			21.9			14.8			4.3	
Peak Hour Factor	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)	6	144	0	0	150	33	39	39	28	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	183	0	0	106	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	20.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	0.0%	50.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0			16.0		16.0	16.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.0			17.0			17.0				
Actuated g/C Ratio		0.42			0.42			0.42				
v/c Ratio		0.19			0.23			0.07				
Control Delay		8.0			7.0			5.6				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.0			7.0			5.6				
LOS		A			A			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.0			7.0			5.6				
Approach LOS		A			A			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 40	
Actuated Cycle Length: 40	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 20.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1012: Best &



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	150	183	106
v/c Ratio	0.19	0.23	0.07
Control Delay	8.0	7.0	5.6
Queue Delay	0.0	0.0	0.0
Total Delay	8.0	7.0	5.6
Queue Length 50th (ft)	19	19	4
Queue Length 95th (ft)	43	46	14
Internal Link Dist (ft)	98	884	573
Turn Bay Length (ft)			
Base Capacity (vph)	784	792	1434
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.19	0.23	0.07

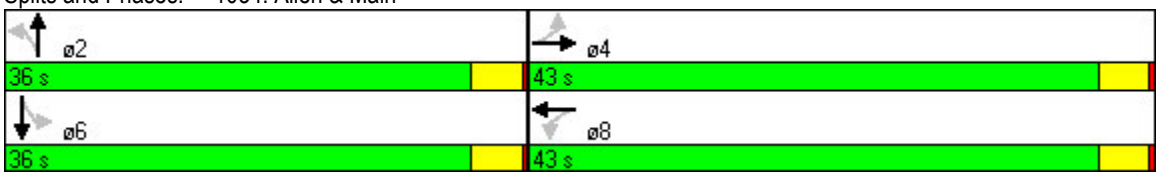
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	20	110	5	25	5	20	150	5	5	410	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.920			0.980			0.995			0.990	
Flt Protected		0.985			0.993			0.994			0.999	
Satd. Flow (prot)	0	1688	0	0	1813	0	0	3500	0	0	5029	0
Flt Permitted		0.914			0.970			0.888			0.937	
Satd. Flow (perm)	0	1566	0	0	1771	0	0	3127	0	0	4717	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		122			6			5			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		319			288			287			353	
Travel Time (s)		7.3			6.5			6.5			8.0	
Peak Hour Factor	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	22	122	6	28	6	22	167	6	6	456	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	205	0	0	40	0	0	195	0	0	495	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	43.0	43.0	0.0	43.0	43.0	0.0	36.0	36.0	0.0	36.0	36.0	0.0
Total Split (%)	54.4%	54.4%	0.0%	54.4%	54.4%	0.0%	45.6%	45.6%	0.0%	45.6%	45.6%	0.0%
Maximum Green (s)	39.0	39.0		39.0	39.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	0.0	-1.0	0.0	0.0	0.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	3.0	4.0	4.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		39.0			39.0			33.0			33.0	
Actuated g/C Ratio		0.49			0.49			0.42			0.42	
v/c Ratio		0.25			0.05			0.15			0.25	
Control Delay		5.7			9.4			14.3			14.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		5.7			9.4			14.3			14.8	
LOS		A			A			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		5.7			9.4			14.3			14.8	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 79	
Actuated Cycle Length: 79	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.25	
Intersection Signal Delay: 12.5	Intersection LOS: B
Intersection Capacity Utilization 41.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1034: Allen & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	205	40	195	495
v/c Ratio	0.25	0.05	0.15	0.25
Control Delay	5.7	9.4	14.3	14.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.7	9.4	14.3	14.8
Queue Length 50th (ft)	21	8	29	54
Queue Length 95th (ft)	56	23	50	76
Internal Link Dist (ft)	239	208	207	273
Turn Bay Length (ft)				
Base Capacity (vph)	835	877	1309	1980
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.05	0.15	0.25

Intersection Summary

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	635	935	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.88	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	3539	2787	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	3539	2787	0	0	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	260			560	477	
Travel Time (s)	5.9			12.7	10.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	706	1039	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	706	1039	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	414	0	0	0	0	889
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			969	284	
Travel Time (s)	7.3			22.0	6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	460	0	0	0	0	988
Shared Lane Traffic (%)						
Lane Group Flow (vph)	460	0	0	0	0	988
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	255	2800	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	3539	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	422			611	490	
Travel Time (s)	9.6			13.9	11.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	283	3111	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	283	3111	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 215.0%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	2666	2571	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	3433	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	3433	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	223			542	780	
Travel Time (s)	5.1			12.3	17.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	2962	2857	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	2962	2857	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 215.0%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	495	100	115	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.975			
Flt Protected						0.987
Satd. Flow (prot)	0	0	3451	0	0	3493
Flt Permitted						0.987
Satd. Flow (perm)	0	0	3451	0	0	3493
Link Speed (mph)	30		30			30
Link Distance (ft)	547		441			294
Travel Time (s)	12.4		10.0			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	550	111	128	356
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	661	0	0	484
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	495	100	115	320
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	550	111	128	356
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			441			636
pX, platoon unblocked	0.98	0.98			0.98	
vC, conflicting volume	1039	331			661	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	993	268			606	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			86	
cM capacity (veh/h)	205	714			946	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	367	294	246	237
Volume Left	0	0	128	0
Volume Right	0	111	0	0
cSH	1700	1700	946	1700
Volume to Capacity	0.22	0.17	0.14	0.14
Queue Length 95th (ft)	0	0	12	0
Control Delay (s)	0.0	0.0	5.5	0.0
Lane LOS			A	
Approach Delay (s)	0.0		2.8	
Approach LOS				

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	125	55	40	140	50	30	240	25	65	440	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.966			0.970			0.987			0.993	
Flt Protected		0.991			0.991			0.995			0.994	
Satd. Flow (prot)	0	1783	0	0	1791	0	0	3476	0	0	5019	0
Flt Permitted		0.875			0.890			0.871			0.882	
Satd. Flow (perm)	0	1574	0	0	1608	0	0	3043	0	0	4454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			19			12			15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		111			158			910			474	
Travel Time (s)		2.5			3.6			20.7			10.8	
Peak Hour Factor	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)	44	139	61	44	156	56	33	267	28	72	489	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	0	256	0	0	328	0	0	589	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	1 6	
Permitted Phases	4			8			2			1 6		
Detector Phase	4	4		8	8		2	2		1	1 6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		10.0		
Total Split (s)	33.0	33.0	0.0	33.0	33.0	0.0	29.0	29.0	0.0	22.0	73.0	0.0
Total Split (%)	39.3%	39.3%	0.0%	39.3%	39.3%	0.0%	34.5%	34.5%	0.0%	26.2%	86.9%	0.0%
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		16.0		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		5.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5		

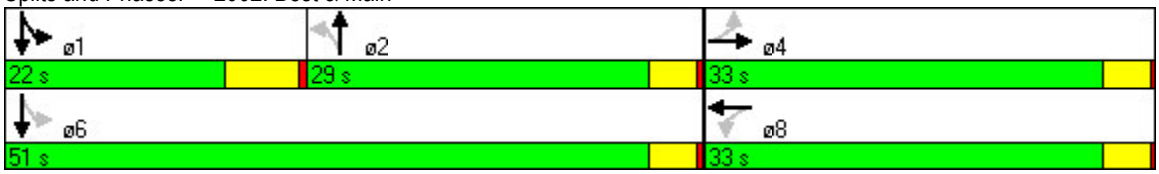
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	51.0
Total Split (%)	61%
Maximum Green (s)	47.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-3.0	-3.0	-1.0
Total Lost Time (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
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		
Recall Mode	Min	Min		Min	Min		Max	Max		Max		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0	0		0	0				
Act Effct Green (s)		16.3			16.3			26.1			48.2	
Actuated g/C Ratio		0.23			0.23			0.37			0.68	
v/c Ratio		0.64			0.66			0.29			0.18	
Control Delay		30.2			31.4			16.8			4.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		30.2			31.4			16.8			4.6	
LOS		C			C			B			A	
Approach Delay		30.2			31.4			16.8			4.6	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 84
Actuated Cycle Length: 70.5
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 16.6 — Intersection LOS: B
Intersection Capacity Utilization 45.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2002: Best & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	244	256	328	589
v/c Ratio	0.64	0.66	0.29	0.18
Control Delay	30.2	31.4	16.8	4.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.2	31.4	16.8	4.6
Queue Length 50th (ft)	87	93	49	26
Queue Length 95th (ft)	155	163	91	53
Internal Link Dist (ft)	31	78	830	394
Turn Bay Length (ft)				
Base Capacity (vph)	685	698	1135	3204
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.36	0.37	0.29	0.18

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	33	113	86	24	119	19	74	219	16	34	458	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.950			0.984			0.992			0.977	
Flt Protected		0.993			0.993			0.988			0.997	
Satd. Flow (prot)	0	1757	0	0	1820	0	0	3469	0	0	4953	0
Flt Permitted		0.950			0.932			0.777			0.907	
Satd. Flow (perm)	0	1681	0	0	1708	0	0	2728	0	0	4506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			10			12			55	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		250			335			338			910	
Travel Time (s)		5.7			7.6			7.7			20.7	
Peak Hour Factor	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)	37	126	96	27	132	21	82	243	18	38	509	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	259	0	0	180	0	0	343	0	0	644	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	14.0	60.0	0.0	32.0	32.0	0.0
Total Split (%)	38.7%	38.7%	0.0%	38.7%	38.7%	0.0%	18.7%	80.0%	0.0%	42.7%	42.7%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0			28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

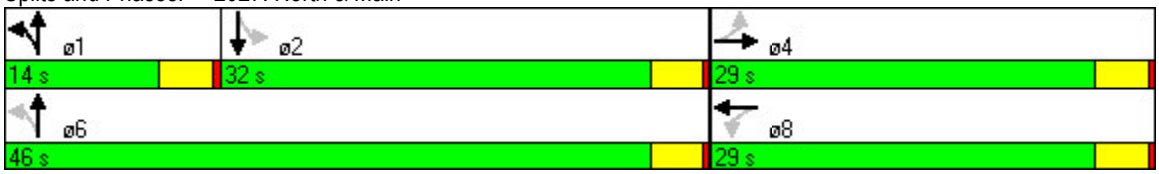
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	46.0
Total Split (%)	61%
Maximum Green (s)	42.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		None			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		14.4			14.4			41.1			29.2	
Actuated g/C Ratio		0.23			0.23			0.67			0.47	
v/c Ratio		0.61			0.44			0.18			0.30	
Control Delay		23.8			22.4			4.5			10.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.8			22.4			4.5			10.3	
LOS		C			C			A			B	
Approach Delay		23.8			22.4			4.5			10.3	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 61.5
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 12.9 — Intersection LOS: B
Intersection Capacity Utilization 47.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2027: North & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	259	180	343	644
v/c Ratio	0.61	0.44	0.18	0.30
Control Delay	23.8	22.4	4.5	10.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.8	22.4	4.5	10.3
Queue Length 50th (ft)	70	53	18	44
Queue Length 95th (ft)	139	106	44	86
Internal Link Dist (ft)	170	255	258	830
Turn Bay Length (ft)				
Base Capacity (vph)	741	734	2060	2171
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.35	0.25	0.17	0.30

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	5	30	345	25	35	755
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.886		0.990			
Flt Protected	0.992					0.998
Satd. Flow (prot)	1491	0	3340	0	0	5026
Flt Permitted	0.992					0.908
Satd. Flow (perm)	1491	0	3340	0	0	4573
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	33		18			
Link Speed (mph)	30		30			30
Link Distance (ft)	383		474			728
Travel Time (s)	8.7		10.8			16.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	12%	12%	7%	7%	3%	3%
Adj. Flow (vph)	6	33	383	28	39	839
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	411	0	0	878
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Maximum Green (s)	21.0		51.0		51.0	51.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	6.4		68.1			68.1
Actuated g/C Ratio	0.08		0.89			0.89
v/c Ratio	0.25		0.14			0.22
Control Delay	19.3		1.3			1.4
Queue Delay	0.0		0.0			0.0
Total Delay	19.3		1.3			1.4
LOS	B		A			A
Approach Delay	19.3		1.3			1.4
Approach LOS	B		A			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 76.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.25
Intersection Signal Delay: 1.9 — Intersection LOS: A
Intersection Capacity Utilization 39.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2101: Dodge & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	39	411	878
v/c Ratio	0.25	0.14	0.22
Control Delay	19.3	1.3	1.4
Queue Delay	0.0	0.0	0.0
Total Delay	19.3	1.3	1.4
Queue Length 50th (ft)	3	12	21
Queue Length 95th (ft)	31	25	38
Internal Link Dist (ft)	303	394	648
Turn Bay Length (ft)			
Base Capacity (vph)	434	2969	4063
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.09	0.14	0.22

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	40	60	15	30	5	55	175	10	5	410	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.929			0.986			0.994			0.997	
Flt Protected		0.993			0.985			0.989			0.999	
Satd. Flow (prot)	0	1718	0	0	1809	0	0	1831	0	0	1855	0
Flt Permitted		0.953			0.924			0.900			0.996	
Satd. Flow (perm)	0	1649	0	0	1697	0	0	1666	0	0	1850	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67			6			6			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			388			675			662	
Travel Time (s)		8.6			8.8			15.3			15.0	
Peak Hour Factor	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)	17	44	67	17	33	6	61	194	11	6	456	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	128	0	0	56	0	0	266	0	0	473	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	14.0	51.0	0.0	23.0	23.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%	23.3%	85.0%	0.0%	38.3%	38.3%	0.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		10.0			19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	37.0
Total Split (%)	62%
Maximum Green (s)	33.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		Max			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		8.5			8.5			34.5			20.3	
Actuated g/C Ratio		0.18			0.18			0.74			0.43	
v/c Ratio		0.36			0.18			0.21			0.59	
Control Delay		12.8			16.8			3.2			15.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.8			16.8			3.2			15.1	
LOS		B			B			A			B	
Approach Delay		12.8			16.8			3.2			15.1	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 46.7
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.59
Intersection Signal Delay: 11.5 — Intersection LOS: B
Intersection Capacity Utilization 52.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: Carlton & Michigan

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	128	56	266	473
v/c Ratio	0.36	0.18	0.21	0.59
Control Delay	12.8	16.8	3.2	15.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.8	16.8	3.2	15.1
Queue Length 50th (ft)	15	12	17	98
Queue Length 95th (ft)	50	35	46	198
Internal Link Dist (ft)	297	308	595	582
Turn Bay Length (ft)				
Base Capacity (vph)	754	741	1271	805
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.08	0.21	0.59

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	90	40	35	140	25	45	120	25	5	165	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.960			0.983			0.982			0.996	
Flt Protected		0.998			0.991			0.988			0.998	
Satd. Flow (prot)	0	1785	0	0	1815	0	0	1807	0	0	1852	0
Flt Permitted		0.998			0.991			0.988			0.998	
Satd. Flow (perm)	0	1785	0	0	1815	0	0	1807	0	0	1852	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			295	
Travel Time (s)		7.4			17.0			9.7			6.7	
Peak Hour Factor	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)	6	100	44	39	156	28	50	133	28	6	183	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	223	0	0	211	0	0	195	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 51.2%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	90	40	35	140	25	45	120	25	5	165	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	100	44	39	156	28	50	133	28	6	183	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	150	222	211	194
Volume Left (vph)	6	39	50	6
Volume Right (vph)	44	28	28	6
Hadj (s)	-0.14	-0.01	0.00	0.02
Departure Headway (s)	5.2	5.2	5.2	5.3
Degree Utilization, x	0.22	0.32	0.31	0.28
Capacity (veh/h)	624	636	630	630
Control Delay (s)	9.7	10.7	10.5	10.3
Approach Delay (s)	9.7	10.7	10.5	10.3
Approach LOS	A	B	B	B

Intersection Summary			
Delay	10.4		
HCM Level of Service	B		
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	75	10	75	140	5	15	60	20	15	70	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.985			0.997			0.972			0.991	
Flt Protected		0.997			0.983			0.992			0.992	
Satd. Flow (prot)	0	1829	0	0	1826	0	0	1796	0	0	3479	0
Flt Permitted		0.997			0.983			0.992			0.992	
Satd. Flow (perm)	0	1829	0	0	1826	0	0	1796	0	0	3479	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		287			325			1308			290	
Travel Time (s)		6.5			7.4			29.7			6.6	
Peak Hour Factor	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)	6	83	11	83	156	6	17	67	22	17	78	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	245	0	0	106	0	0	101	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 37.0%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	75	10	75	140	5	15	60	20	15	70	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	83	11	83	156	6	17	67	22	17	78	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	100	244	106	56	44
Volume Left (vph)	6	83	17	17	0
Volume Right (vph)	11	6	22	0	6
Hadj (s)	-0.02	0.09	-0.06	0.18	-0.05
Departure Headway (s)	4.7	4.6	4.9	5.6	5.4
Degree Utilization, x	0.13	0.32	0.14	0.09	0.07
Capacity (veh/h)	710	737	678	592	619
Control Delay (s)	8.4	9.8	8.8	8.0	7.6
Approach Delay (s)	8.4	9.8	8.8	7.8	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	9.0		
HCM Level of Service	A		
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	160	290	10	75	415
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.892		0.995			
Flt Protected	0.990					0.992
Satd. Flow (prot)	1645	0	5060	0	0	3511
Flt Permitted	0.990					0.992
Satd. Flow (perm)	1645	0	5060	0	0	3511
Link Speed (mph)	30		30			30
Link Distance (ft)	287		565			287
Travel Time (s)	6.5		12.8			6.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	178	322	11	83	461
Shared Lane Traffic (%)						
Lane Group Flow (vph)	222	0	333	0	0	544
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 41.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	40	160	290	10	75	415
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	44	178	322	11	83	461
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			565			287
pX, platoon unblocked	0.97					
vC, conflicting volume	725	113			333	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	667	113			333	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	88	81			93	
cM capacity (veh/h)	356	918			1223	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	222	129	129	76	237	307
Volume Left	44	0	0	0	83	0
Volume Right	178	0	0	11	0	0
cSH	698	1700	1700	1700	1223	1700
Volume to Capacity	0.32	0.08	0.08	0.04	0.07	0.18
Queue Length 95th (ft)	34	0	0	0	5	0
Control Delay (s)	12.5	0.0	0.0	0.0	3.3	0.0
Lane LOS	B				A	
Approach Delay (s)	12.5	0.0			1.4	
Approach LOS	B					

Intersection Summary			
Average Delay	3.2		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	45	40	5	20	5	50	135	10	30	250	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.946			0.976			0.993			0.972	
Flt Protected		0.992			0.991			0.987			0.996	
Satd. Flow (prot)	0	1748	0	0	1802	0	0	1826	0	0	3426	0
Flt Permitted		0.967			0.964			0.857			0.924	
Satd. Flow (perm)	0	1704	0	0	1753	0	0	1585	0	0	3179	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			6			8			72	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1103			233			662			363	
Travel Time (s)		25.1			5.3			15.0			8.3	
Peak Hour Factor	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)	17	50	44	6	22	6	56	150	11	33	278	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	34	0	0	217	0	0	383	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.22			0.07			0.22			0.19	
Control Delay		12.2			14.3			5.6			4.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.2			14.3			5.6			4.3	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		12.2			14.3			5.6			4.3	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.22	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 37.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: High & Michigan

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	111	34	217	383
v/c Ratio	0.22	0.07	0.22	0.19
Control Delay	12.2	14.3	5.6	4.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.2	14.3	5.6	4.3
Queue Length 50th (ft)	18	7	29	21
Queue Length 95th (ft)	51	25	54	36
Internal Link Dist (ft)	1023	153	582	283
Turn Bay Length (ft)				
Base Capacity (vph)	514	501	980	1988
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.07	0.22	0.19

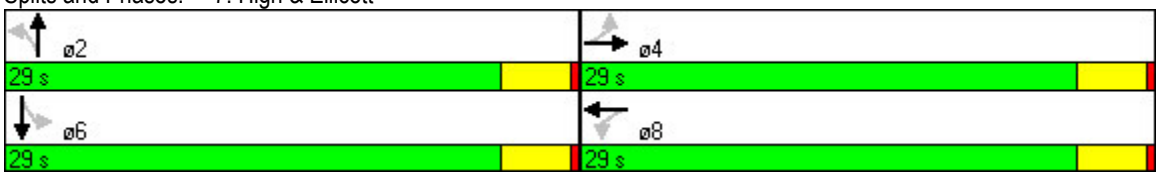
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	140	30	25	105	35	40	100	70	0	145	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.979			0.971			0.955				
Flt Protected		0.995			0.992			0.991				
Satd. Flow (prot)	0	1815	0	0	1794	0	0	1763	0	0	1863	0
Flt Permitted		0.967			0.946			0.932				
Satd. Flow (perm)	0	1763	0	0	1711	0	0	1658	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			30			57				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			1103			363			365	
Travel Time (s)		7.8			25.1			8.3			8.3	
Peak Hour Factor	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)	22	156	33	28	117	39	44	111	78	0	161	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	211	0	0	184	0	0	233	0	0	161	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		26.0			26.0			26.0			26.0	
Actuated g/C Ratio		0.45			0.45			0.45			0.45	
v/c Ratio		0.26			0.23			0.30			0.19	
Control Delay		10.1			9.2			8.9			10.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.1			9.2			8.9			10.5	
LOS		B			A			A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.1			9.2			8.9			10.5	
Approach LOS		B			A			A			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.30	
Intersection Signal Delay: 9.6	Intersection LOS: A
Intersection Capacity Utilization 42.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: High & Ellicott



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	211	184	233	161
v/c Ratio	0.26	0.23	0.30	0.19
Control Delay	10.1	9.2	8.9	10.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.1	9.2	8.9	10.5
Queue Length 50th (ft)	38	31	36	32
Queue Length 95th (ft)	76	64	75	63
Internal Link Dist (ft)	262	1023	283	285
Turn Bay Length (ft)				
Base Capacity (vph)	802	784	775	835
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.23	0.30	0.19

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lane Configurations							
Volume (vph)	60	105	410	45	90	490	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95	
Frt	0.914		0.985				
Flt Protected	0.982					0.992	
Satd. Flow (prot)	1672	0	5009	0	0	3511	
Flt Permitted	0.982					0.823	
Satd. Flow (perm)	1672	0	5009	0	0	2913	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	117		30				
Link Speed (mph)	30		30			30	
Link Distance (ft)	293		353			353	
Travel Time (s)	6.7		8.0			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	67	117	456	50	100	544	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	184	0	506	0	0	644	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		1		1	1	
Detector Template							
Leading Detector (ft)	50		50		50	50	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	50		50		50	50	
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Turn Type					custom		
Protected Phases	8		2		1	1 6	6
Permitted Phases					6		
Detector Phase	8		2		1	1 6	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0		4.0
Minimum Split (s)	20.0		20.0		8.0		20.0
Total Split (s)	27.0	0.0	36.0	0.0	14.0	64.0	50.0
Total Split (%)	35.1%	0.0%	46.8%	0.0%	18.2%	83.1%	65%
Maximum Green (s)	23.0		32.0		10.0		46.0
Yellow Time (s)	3.5		3.5		3.5		3.5
All-Red Time (s)	0.5		0.5		0.5		0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lead/Lag			Lag		Lead		
Lead-Lag Optimize?			Yes		Yes		
Vehicle Extension (s)	3.0		3.0		3.0		3.0
Recall Mode	Min		Max		None		Max
Walk Time (s)	5.0		5.0				5.0
Flash Dont Walk (s)	11.0		11.0				11.0
Pedestrian Calls (#/hr)	0		0				0
Act Effct Green (s)	9.4		34.1			47.1	
Actuated g/C Ratio	0.15		0.55			0.75	
v/c Ratio	0.52		0.18			0.28	
Control Delay	15.8		7.5			3.0	
Queue Delay	0.0		0.0			0.0	
Total Delay	15.8		7.5			3.0	
LOS	B		A			A	
Approach Delay	15.8		7.5			3.0	
Approach LOS	B		A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 77	
Actuated Cycle Length: 62.5	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 44.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: High & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	184	506	644
v/c Ratio	0.52	0.18	0.28
Control Delay	15.8	7.5	3.0
Queue Delay	0.0	0.0	0.0
Total Delay	15.8	7.5	3.0
Queue Length 50th (ft)	23	30	25
Queue Length 95th (ft)	72	55	58
Internal Link Dist (ft)	213	273	273
Turn Bay Length (ft)			
Base Capacity (vph)	715	2747	2299
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.26	0.18	0.28

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	20	110	0	0	0	40	250	10	5	295	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.890						0.996			0.992	
Flt Protected		0.998						0.993			0.999	
Satd. Flow (prot)	0	1655	0	0	0	0	0	1842	0	0	1846	0
Flt Permitted		0.998						0.930			0.996	
Satd. Flow (perm)	0	1655	0	0	0	0	0	1725	0	0	1840	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		122						5			10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			376			922			675	
Travel Time (s)		8.3			8.5			21.0			15.3	
Peak Hour Factor	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)	6	22	122	0	0	0	44	278	11	6	328	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	0	0	0	333	0	0	356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm			Perm		
Protected Phases		4						2			6	
Permitted Phases	4						2			6		
Minimum Split (s)	20.0	20.0					20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0					36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5					3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5					0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0					5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.0						37.0			37.0	
Actuated g/C Ratio		0.28						0.62			0.62	
v/c Ratio		0.27						0.31			0.31	
Control Delay		6.9						6.3			6.2	
Queue Delay		0.0						0.0			0.0	
Total Delay		6.9						6.3			6.2	
LOS		A						A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		6.9						6.3			6.2	
Approach LOS		A						A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Virginia & Michigan

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	150	333	356
v/c Ratio	0.27	0.31	0.31
Control Delay	6.9	6.3	6.2
Queue Delay	0.0	0.0	0.0
Total Delay	6.9	6.3	6.2
Queue Length 50th (ft)	7	48	50
Queue Length 95th (ft)	43	84	87
Internal Link Dist (ft)	283	842	595
Turn Bay Length (ft)			
Base Capacity (vph)	556	1066	1139
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.27	0.31	0.31

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	70	40	230	60	5	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.951		0.972			
Flt Protected	0.969					0.999
Satd. Flow (prot)	1717	0	1811	0	0	1861
Flt Permitted	0.969					0.999
Satd. Flow (perm)	1717	0	1811	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	735		148			425
Travel Time (s)	16.7		3.4			9.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	44	256	67	6	261
Shared Lane Traffic (%)						
Lane Group Flow (vph)	122	0	323	0	0	267
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.4%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	40	230	60	5	235
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	78	44	256	67	6	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			939			
pX, platoon unblocked						
vC, conflicting volume	561	289			322	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	561	289			322	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	84	94			100	
cM capacity (veh/h)	487	750			1238	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	122	322	267
Volume Left	78	0	6
Volume Right	44	67	0
cSH	558	1700	1238
Volume to Capacity	0.22	0.19	0.00
Queue Length 95th (ft)	21	0	0
Control Delay (s)	13.3	0.0	0.2
Lane LOS	B		A
Approach Delay (s)	13.3	0.0	0.2
Approach LOS	B		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	120	20	10	130	20	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981				0.919	
Flt Protected				0.996	0.980	
Satd. Flow (prot)	1827	0	0	1855	1678	0
Flt Permitted				0.996	0.980	
Satd. Flow (perm)	1827	0	0	1855	1678	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	747			377	583	
Travel Time (s)	17.0			8.6	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	133	22	11	144	22	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	0	0	155	55	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	120	20	10	130	20	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	133	22	11	144	22	33

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	156	156	56
Volume Left (vph)	0	11	22
Volume Right (vph)	22	0	33
Hadj (s)	-0.05	0.05	-0.25
Departure Headway (s)	4.1	4.2	4.3
Degree Utilization, x	0.18	0.18	0.07
Capacity (veh/h)	851	833	773
Control Delay (s)	8.0	8.2	7.6
Approach Delay (s)	8.0	8.2	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	5	50	25	10	245	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.962		0.981	
Flt Protected		0.995			0.959	
Satd. Flow (prot)	0	1853	1792	0	1752	0
Flt Permitted		0.995			0.959	
Satd. Flow (perm)	0	1853	1792	0	1752	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		735	363		583	
Travel Time (s)		16.7	8.3		13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	56	28	11	272	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	62	39	0	316	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	5	50	25	10	245	40
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	56	28	11	272	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)			363			
pX, platoon unblocked						
vC, conflicting volume	39				100	33
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39				100	33
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				70	96
cM capacity (veh/h)	1571				896	1040

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	61	39	317
Volume Left	6	0	272
Volume Right	0	11	44
cSH	1571	1700	913
Volume to Capacity	0.00	0.02	0.35
Queue Length 95th (ft)	0	0	39
Control Delay (s)	0.7	0.0	11.0
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	11.0
Approach LOS			B

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	250	275	25	275	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.929				0.865	
Flt Protected				0.996		
Satd. Flow (prot)	1730	0	0	1855	1611	0
Flt Permitted				0.996		
Satd. Flow (perm)	1730	0	0	1855	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	791			148	443	
Travel Time (s)	18.0			3.4	10.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	278	306	28	306	0	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	584	0	0	334	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.2%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	250	275	25	275	0	45
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)	278	306	28	306	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	791					
pX, platoon unblocked						
vC, conflicting volume			583		792	431
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			583		792	431
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			97		100	92
cM capacity (veh/h)			991		348	625

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	583	333	50
Volume Left	0	28	0
Volume Right	306	0	50
cSH	1700	991	625
Volume to Capacity	0.34	0.03	0.08
Queue Length 95th (ft)	0	2	7
Control Delay (s)	0.0	1.0	11.3
Lane LOS		A	B
Approach Delay (s)	0.0	1.0	11.3
Approach LOS			B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	110	0	30	155	10	120	105	90	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.993			0.961				
Flt Protected		0.991			0.992			0.981				
Satd. Flow (prot)	0	1846	0	0	1835	0	0	1756	0	0	0	0
Flt Permitted		0.991			0.992			0.981				
Satd. Flow (perm)	0	1846	0	0	1835	0	0	1756	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			1080			316			653	
Travel Time (s)		6.8			24.5			7.2			14.8	
Peak Hour Factor	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)	28	122	0	33	172	11	133	117	100	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	216	0	0	350	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 37.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	110	0	30	155	10	120	105	90	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	28	122	0	33	172	11	133	117	100	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	150	217	350
Volume Left (vph)	28	33	133
Volume Right (vph)	0	11	100
Hadj (s)	0.07	0.03	-0.06
Departure Headway (s)	5.2	5.1	4.8
Degree Utilization, x	0.22	0.30	0.47
Capacity (veh/h)	642	665	718
Control Delay (s)	9.6	10.3	11.9
Approach Delay (s)	9.6	10.3	11.9
Approach LOS	A	B	B

Intersection Summary			
Delay	10.9		
HCM Level of Service	B		
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	105	45	35	75	15	35	110	45	15	170	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.961			0.983				0.850		0.990	
Flt Protected		0.998			0.986			0.988			0.996	
Satd. Flow (prot)	0	1787	0	0	1805	0	0	1840	1583	0	1837	0
Flt Permitted		0.990			0.832			0.912			0.981	
Satd. Flow (perm)	0	1772	0	0	1523	0	0	1699	1583	0	1809	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			9				50		13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			412			330			643	
Travel Time (s)		24.5			9.4			7.5			14.6	
Peak Hour Factor	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)	6	117	50	39	83	17	39	122	50	17	189	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	173	0	0	139	0	0	161	50	0	223	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	51.0	51.0	51.0	51.0	51.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	28.2%	28.2%	0.0%	71.8%	71.8%	71.8%	71.8%	71.8%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		12.0			12.0			51.2	51.2		51.2	
Actuated g/C Ratio		0.17			0.17			0.74	0.74		0.74	
v/c Ratio		0.52			0.51			0.13	0.04		0.17	
Control Delay		26.7			29.8			3.4	1.3		3.4	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		26.7			29.8			3.4	1.3		3.4	
LOS		C			C			A	A		A	
Approach Delay		26.7			29.8			2.9			3.4	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 71
Actuated Cycle Length: 69.2
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.52
Intersection Signal Delay: 13.6 — Intersection LOS: B
Intersection Capacity Utilization 42.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 21: North & Michigan

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	173	139	161	50	223
v/c Ratio	0.52	0.51	0.13	0.04	0.17
Control Delay	26.7	29.8	3.4	1.3	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	29.8	3.4	1.3	3.4
Queue Length 50th (ft)	53	47	14	0	19
Queue Length 95th (ft)	105	95	39	9	50
Internal Link Dist (ft)	1000	332	250		563
Turn Bay Length (ft)					
Base Capacity (vph)	458	382	1256	1183	1341
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.38	0.36	0.13	0.04	0.17

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	5	20	20	35	50	0	510	10	20	695	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.934			0.935			0.997				
Flt Protected		0.981			0.991						0.999	
Satd. Flow (prot)	0	1707	0	0	1726	0	0	5070	0	0	3536	0
Flt Permitted		0.815			0.927						0.934	
Satd. Flow (perm)	0	1418	0	0	1615	0	0	5070	0	0	3306	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			56			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		401			457			736			698	
Travel Time (s)		9.1			10.4			16.7			15.9	
Peak Hour Factor	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)	17	6	22	22	39	56	0	567	11	22	772	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	117	0	0	578	0	0	794	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.4			8.4			59.0			59.0	
Actuated g/C Ratio		0.12			0.12			0.81			0.81	
v/c Ratio		0.24			0.49			0.14			0.30	
Control Delay		20.2			23.8			2.2			2.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.2			23.8			2.2			2.8	
LOS		C			C			A			A	
Approach Delay		20.2			23.8			2.2			2.8	
Approach LOS		C			C			A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 72.6	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 4.7	Intersection LOS: A
Intersection Capacity Utilization 46.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 27: Delta Sonic & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	45	117	578	794
v/c Ratio	0.24	0.49	0.14	0.30
Control Delay	20.2	23.8	2.2	2.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.2	23.8	2.2	2.8
Queue Length 50th (ft)	9	26	16	38
Queue Length 95th (ft)	35	67	32	74
Internal Link Dist (ft)	321	377	656	618
Turn Bay Length (ft)				
Base Capacity (vph)	427	508	4119	2685
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.11	0.23	0.14	0.30

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	30	0	50	40	35	10	110	25	0	95	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.962			0.977				
Flt Protected		0.983			0.980			0.997				
Satd. Flow (prot)	0	1831	0	0	1756	0	0	1814	0	0	1863	0
Flt Permitted		0.983			0.980			0.997				
Satd. Flow (perm)	0	1831	0	0	1756	0	0	1814	0	0	1863	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		655			1107			365			316	
Travel Time (s)		14.9			25.2			8.3			7.2	
Peak Hour Factor	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)	17	33	0	56	44	39	11	122	28	0	106	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	139	0	0	161	0	0	106	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 31.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	30	0	50	40	35	10	110	25	0	95	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	33	0	56	44	39	11	122	28	0	106	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	50	139	161	106
Volume Left (vph)	17	56	11	0
Volume Right (vph)	0	39	28	0
Hadj (s)	0.10	-0.05	-0.06	0.03
Departure Headway (s)	4.8	4.5	4.4	4.6
Degree Utilization, x	0.07	0.17	0.20	0.13
Capacity (veh/h)	692	742	774	740
Control Delay (s)	8.1	8.5	8.5	8.3
Approach Delay (s)	8.1	8.5	8.5	8.3
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.4		
HCM Level of Service	A		
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	15	40	460	5	25	420
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.903		0.998			
Flt Protected	0.986					0.997
Satd. Flow (prot)	1659	0	5075	0	0	3529
Flt Permitted	0.986					0.997
Satd. Flow (perm)	1659	0	5075	0	0	3529
Link Speed (mph)	30		30			30
Link Distance (ft)	655		353			338
Travel Time (s)	14.9		8.0			7.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	44	511	6	28	467
Shared Lane Traffic (%)						
Lane Group Flow (vph)	61	0	517	0	0	495
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 34.7%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	15	40	460	5	25	420
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	44	511	6	28	467
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			353			338
pX, platoon unblocked	0.97					
vC, conflicting volume	803	173			517	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	724	173			517	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	95			97	
cM capacity (veh/h)	339	840			1045	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	61	204	204	108	183	311
Volume Left	17	0	0	0	28	0
Volume Right	44	0	0	6	0	0
cSH	599	1700	1700	1700	1045	1700
Volume to Capacity	0.10	0.12	0.12	0.06	0.03	0.18
Queue Length 95th (ft)	8	0	0	0	2	0
Control Delay (s)	11.7	0.0	0.0	0.0	1.5	0.0
Lane LOS	B				A	
Approach Delay (s)	11.7	0.0			0.6	
Approach LOS	B					

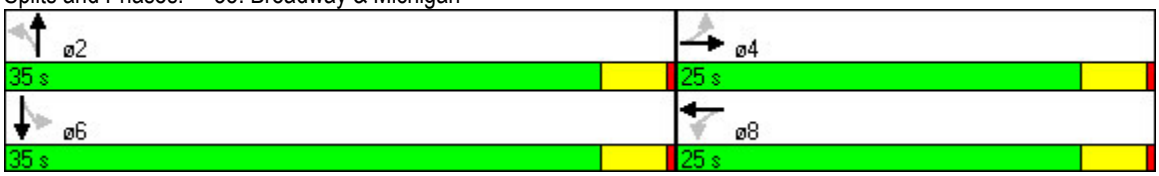
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	185	20	20	110	20	10	375	25	40	170	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.987			0.980			0.991			0.976	
Flt Protected		0.996			0.993			0.999			0.992	
Satd. Flow (prot)	0	3380	0	0	3283	0	0	3504	0	0	3361	0
Flt Permitted		0.927			0.906			0.948			0.856	
Satd. Flow (perm)	0	3146	0	0	2996	0	0	3325	0	0	2900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			22			16			44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		260			919			684			808	
Travel Time (s)		5.9			20.9			15.5			18.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	22	206	22	22	122	22	11	417	28	44	189	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	250	0	0	166	0	0	456	0	0	277	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.22			0.16			0.26			0.18	
Control Delay		13.4			12.1			8.3			5.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.4			12.1			8.3			5.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		13.4			12.1			8.3			5.6	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.26	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 42.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 35: Broadway & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	250	166	456	277
v/c Ratio	0.22	0.16	0.26	0.18
Control Delay	13.4	12.1	8.3	5.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.4	12.1	8.3	5.6
Queue Length 50th (ft)	30	18	42	17
Queue Length 95th (ft)	53	36	66	29
Internal Link Dist (ft)	180	839	604	728
Turn Bay Length (ft)				
Base Capacity (vph)	1113	1063	1726	1520
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.16	0.26	0.18

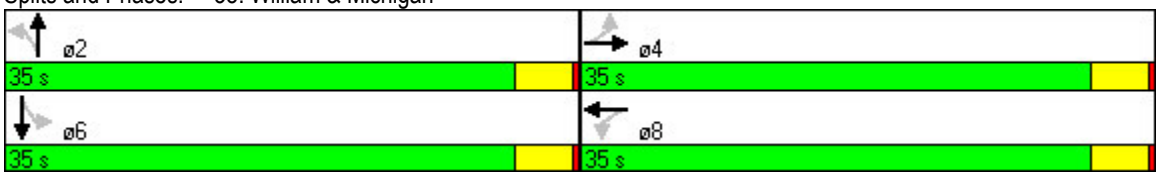
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	105	25	30	115	25	15	375	5	60	155	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.973			0.978			0.998			0.990	
Flt Protected		0.996			0.991			0.998			0.987	
Satd. Flow (prot)	0	3239	0	0	3240	0	0	3424	0	0	3359	0
Flt Permitted		0.938			0.898			0.941			0.784	
Satd. Flow (perm)	0	3051	0	0	2936	0	0	3229	0	0	2669	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			28			2			13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		191			538			305			684	
Travel Time (s)		4.3			12.2			6.9			15.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	11	117	28	33	128	28	17	417	6	67	172	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	0	0	189	0	0	440	0	0	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		31.0			31.0			31.0			31.0	
Actuated g/C Ratio		0.44			0.44			0.44			0.44	
v/c Ratio		0.11			0.14			0.31			0.22	
Control Delay		9.6			10.2			13.3			12.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.6			10.2			13.3			12.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			B			B			B	
Approach Delay		9.6			10.2			13.3			12.0	
Approach LOS		A			B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.31	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 39.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 38: William & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	156	189	440	256
v/c Ratio	0.11	0.14	0.31	0.22
Control Delay	9.6	10.2	13.3	12.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.6	10.2	13.3	12.0
Queue Length 50th (ft)	16	20	61	32
Queue Length 95th (ft)	32	38	92	54
Internal Link Dist (ft)	111	458	225	604
Turn Bay Length (ft)				
Base Capacity (vph)	1367	1316	1431	1189
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.11	0.14	0.31	0.22

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	395	40	0	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt			0.986			
Flt Protected						
Satd. Flow (prot)	0	0	3490	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	0	3490	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	263		290			305
Travel Time (s)	6.0		6.6			6.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	439	44	0	233
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	483	0	0	233
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type						
Protected Phases			2			6
Permitted Phases						
Minimum Split (s)			20.0			20.0
Total Split (s)	0.0	0.0	20.0	0.0	0.0	20.0
Total Split (%)	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Maximum Green (s)			16.0			16.0
Yellow Time (s)			3.5			3.5
All-Red Time (s)			0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)			5.0			5.0
Flash Dont Walk (s)			11.0			11.0
Pedestrian Calls (#/hr)			0			0
Act Effct Green (s)			20.0			20.0
Actuated g/C Ratio			1.00			1.00
v/c Ratio			0.14			0.07
Control Delay			0.1			0.0
Queue Delay			0.0			0.0
Total Delay			0.1			0.0
LOS			A			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay			0.1			0.0
Approach LOS			A			A

Intersection Summary	
Area Type:	Other
Cycle Length: 20	
Actuated Cycle Length: 20	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.14	
Intersection Signal Delay: 0.1	Intersection LOS: A
Intersection Capacity Utilization 15.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 42: slip ramp & Michigan

Lane Group	NBT	SBT
Lane Group Flow (vph)	483	233
v/c Ratio	0.14	0.07
Control Delay	0.1	0.0
Queue Delay	0.0	0.0
Total Delay	0.1	0.0
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)	210	225
Turn Bay Length (ft)		
Base Capacity (vph)	3490	3539
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.14	0.07

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	5	25	0	30	5	605	35	15	505	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.955			0.927			0.992				
Flt Protected		0.984			0.978						0.999	
Satd. Flow (prot)	0	1750	0	0	1689	0	0	5045	0	0	3468	0
Flt Permitted		0.928			0.844			0.937			0.931	
Satd. Flow (perm)	0	1651	0	0	1457	0	0	4727	0	0	3232	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			33			22				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		738			789			698			650	
Travel Time (s)		16.8			17.9			15.9			14.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	6	6	6	28	0	33	6	672	39	17	561	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	61	0	0	717	0	0	578	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.2			7.2			64.6			64.6	
Actuated g/C Ratio		0.10			0.10			0.87			0.87	
v/c Ratio		0.11			0.36			0.17			0.21	
Control Delay		25.6			23.7			1.6			1.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		25.6			23.7			1.6			1.8	
LOS		C			C			A			A	
Approach Delay		25.6			23.7			1.6			1.8	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 74.1
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 3.0 — Intersection LOS: A
Intersection Capacity Utilization 36.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 47: Enterprise & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	18	61	717	578
v/c Ratio	0.11	0.36	0.17	0.21
Control Delay	25.6	23.7	1.6	1.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	25.6	23.7	1.6	1.8
Queue Length 50th (ft)	6	14	18	23
Queue Length 95th (ft)	22	44	33	43
Internal Link Dist (ft)	658	709	618	570
Turn Bay Length (ft)				
Base Capacity (vph)	474	438	4125	2819
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.14	0.17	0.21

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	65	60	35	85	30	65	555	50	20	470	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.961			0.973			0.989			0.978	
Flt Protected		0.980			0.988			0.995			0.998	
Satd. Flow (prot)	0	1721	0	0	1660	0	0	5004	0	0	3324	0
Flt Permitted		0.747			0.874			0.831			0.920	
Satd. Flow (perm)	0	1311	0	0	1469	0	0	4179	0	0	3064	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			15			32			48	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1128			954			650			1602	
Travel Time (s)		25.6			21.7			14.8			36.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	4%	4%	10%	10%	10%	2%	2%	2%	6%	6%	6%
Adj. Flow (vph)	94	72	67	39	94	33	72	617	56	22	522	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	233	0	0	166	0	0	745	0	0	638	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		15.9			15.9			52.2			52.2	
Actuated g/C Ratio		0.21			0.21			0.69			0.69	
v/c Ratio		0.80			0.52			0.26			0.30	
Control Delay		45.0			29.8			5.1			5.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		45.0			29.8			5.1			5.3	
LOS		D			C			A			A	
Approach Delay		45.0			29.8			5.1			5.3	
Approach LOS		D			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 76.1
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 12.7 — Intersection LOS: B
Intersection Capacity Utilization 57.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 50: Utica & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	233	166	745	638
v/c Ratio	0.80	0.52	0.26	0.30
Control Delay	45.0	29.8	5.1	5.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	45.0	29.8	5.1	5.3
Queue Length 50th (ft)	92	62	40	49
Queue Length 95th (ft)	169	118	68	87
Internal Link Dist (ft)	1048	874	570	1522
Turn Bay Length (ft)				
Base Capacity (vph)	380	417	2878	2118
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.40	0.26	0.30

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	115	55	80	125	10	65	555	55	15	415	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.966			0.993			0.988			0.980	
Flt Protected		0.985			0.982			0.995			0.998	
Satd. Flow (prot)	0	3271	0	0	3259	0	0	4951	0	0	3395	0
Flt Permitted		0.791			0.758			0.854			0.930	
Satd. Flow (perm)	0	2627	0	0	2516	0	0	4249	0	0	3164	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			8			43			50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			1227			1602			285	
Travel Time (s)		24.5			27.9			36.4			6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	3%	3%	3%	4%	4%	4%
Adj. Flow (vph)	83	128	61	89	139	11	72	617	61	17	461	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	272	0	0	239	0	0	750	0	0	550	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.2			10.2			36.6			36.6	
Actuated g/C Ratio		0.19			0.19			0.67			0.67	
v/c Ratio		0.50			0.50			0.26			0.26	
Control Delay		18.5			22.9			4.0			4.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		18.5			22.9			4.0			4.0	
LOS		B			C			A			A	
Approach Delay		18.5			22.9			4.0			4.0	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 54.8
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 8.7 — Intersection LOS: A
Intersection Capacity Utilization 53.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 53: Ferry & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	272	239	750	550
v/c Ratio	0.50	0.50	0.26	0.26
Control Delay	18.5	22.9	4.0	4.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.5	22.9	4.0	4.0
Queue Length 50th (ft)	32	35	26	26
Queue Length 95th (ft)	61	63	49	53
Internal Link Dist (ft)	1000	1147	1522	205
Turn Bay Length (ft)				
Base Capacity (vph)	811	741	2851	2129
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.34	0.32	0.26	0.26

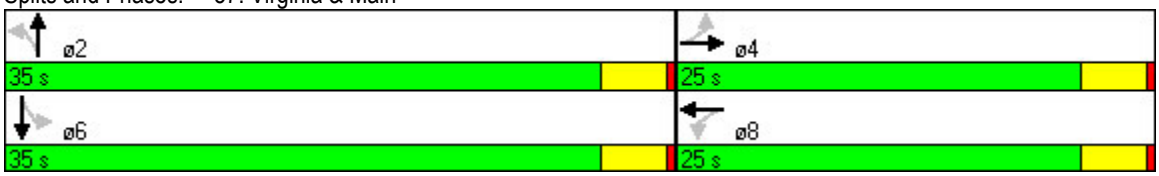
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	50	45	5	40	5	40	230	20	40	320	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.957			0.986			0.990			0.982	
Flt Protected		0.984			0.995			0.993			0.995	
Satd. Flow (prot)	0	1754	0	0	1827	0	0	4999	0	0	3458	0
Flt Permitted		0.907			0.977			0.860			0.900	
Satd. Flow (perm)	0	1617	0	0	1794	0	0	4330	0	0	3128	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			6			22			38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		390			155			695			565	
Travel Time (s)		8.9			3.5			15.8			12.8	
Peak Hour Factor	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)	50	56	50	6	44	6	44	256	22	44	356	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	0	0	56	0	0	322	0	0	456	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.26			0.09			0.14			0.28	
Control Delay		11.5			12.6			7.2			8.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.5			12.6			7.2			8.0	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.5			12.6			7.2			8.0	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 41.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 57: Virginia & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	156	56	322	456
v/c Ratio	0.26	0.09	0.14	0.28
Control Delay	11.5	12.6	7.2	8.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.5	12.6	7.2	8.0
Queue Length 50th (ft)	28	12	19	40
Queue Length 95th (ft)	65	32	31	64
Internal Link Dist (ft)	310	75	615	485
Turn Bay Length (ft)				
Base Capacity (vph)	595	632	2248	1635
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.09	0.14	0.28

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	55	80	20	185	270	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.920				0.988	
Flt Protected	0.980			0.995		
Satd. Flow (prot)	1679	0	0	1853	1840	0
Flt Permitted	0.980			0.995		
Satd. Flow (perm)	1679	0	0	1853	1840	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	1107			363	330	
Travel Time (s)	25.2			8.3	7.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	61	89	22	206	300	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	150	0	0	228	328	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	55	80	20	185	270	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	61	89	22	206	300	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				363	330	
pX, platoon unblocked						
vC, conflicting volume	564	314	328			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	564	314	328			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	87	88	98			
cM capacity (veh/h)	478	726	1232			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	150	228	328
Volume Left	61	22	0
Volume Right	89	0	28
cSH	600	1232	1700
Volume to Capacity	0.25	0.02	0.19
Queue Length 95th (ft)	25	1	0
Control Delay (s)	13.0	0.9	0.0
Lane LOS	B	A	
Approach Delay (s)	13.0	0.9	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	10	5	155	195	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.947				0.996	
Flt Protected	0.971			0.998		
Satd. Flow (prot)	1713	0	0	1859	1855	0
Flt Permitted	0.971			0.998		
Satd. Flow (perm)	1713	0	0	1859	1855	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	333			295	363	
Travel Time (s)	7.6			6.7	8.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	11	6	172	217	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	178	223	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 22.2%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	10	5	155	195	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	11	6	172	217	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					363	
pX, platoon unblocked	0.99	0.99	0.99			
vC, conflicting volume	403	219	222			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	388	202	205			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	99	100			
cM capacity (veh/h)	605	827	1348			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	178	222
Volume Left	17	6	0
Volume Right	11	0	6
cSH	678	1348	1700
Volume to Capacity	0.04	0.00	0.13
Queue Length 95th (ft)	3	0	0
Control Delay (s)	10.5	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	10.5	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	10	10	5	10	5	15	45	15	5	25	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.947			0.965			0.973			0.978	
Flt Protected		0.989			0.987			0.990			0.993	
Satd. Flow (prot)	0	1745	0	0	1774	0	0	1794	0	0	3437	0
Flt Permitted		0.989			0.987			0.990			0.993	
Satd. Flow (perm)	0	1745	0	0	1774	0	0	1794	0	0	3437	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			333			290			355	
Travel Time (s)		6.5			7.6			6.6			8.1	
Peak Hour Factor	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)	6	11	11	6	11	6	17	50	17	6	28	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	0	0	23	0	0	84	0	0	40	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 20.8%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	10	10	5	10	5	15	45	15	5	25	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	11	11	6	11	6	17	50	17	6	28	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	28	22	83	19	19
Volume Left (vph)	6	6	17	6	0
Volume Right (vph)	11	6	17	0	6
Hadj (s)	-0.17	-0.07	-0.05	0.18	-0.17
Departure Headway (s)	4.0	4.1	4.1	4.8	4.5
Degree Utilization, x	0.03	0.03	0.09	0.03	0.02
Capacity (veh/h)	864	843	855	731	779
Control Delay (s)	7.2	7.2	7.5	6.8	6.4
Approach Delay (s)	7.2	7.2	7.5	6.6	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	7.2		
HCM Level of Service	A		
Intersection Capacity Utilization	20.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				↑↑↑↑	↖↖	
Volume (vph)	0	0	0	770	285	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	6408	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	6408	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	339			382	585	
Travel Time (s)	7.7			8.7	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	856	317	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	856	317	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.3%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	770	285	0
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)	0	0	0	856	317	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)	339			382		
pX, platoon unblocked						
vC, conflicting volume			0		214	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		214	0
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		58	100
cM capacity (veh/h)			1622		755	1084

Direction, Lane #	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	214	214	214	214	158	158
Volume Left	0	0	0	0	158	158
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	755	755
Volume to Capacity	0.13	0.13	0.13	0.13	0.21	0.21
Queue Length 95th (ft)	0	0	0	0	20	20
Control Delay (s)	0.0	0.0	0.0	0.0	11.0	11.0
Lane LOS					B	B
Approach Delay (s)	0.0				11.0	
Approach LOS					B	

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	185	800	25	0	0	0	0	295	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.996						0.998	
Flt Protected					0.991							
Satd. Flow (prot)	0	0	0	0	6325	0	0	0	0	0	1859	0
Flt Permitted					0.991							
Satd. Flow (perm)	0	0	0	0	6325	0	0	0	0	0	1859	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					131						1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	206	889	28	0	0	0	0	328	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1123	0	0	0	0	0	334	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.4	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.5	50.5						25.6	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.2	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.4	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					51.5						26.6	
Actuated g/C Ratio					0.61						0.31	
v/c Ratio					0.29						0.57	
Control Delay					7.2						30.2	
Queue Delay					0.0						0.0	
Total Delay					7.2						30.2	
LOS					A						C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					7.2						30.2	
Approach LOS					A						C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 12.5	Intersection LOS: B
Intersection Capacity Utilization 37.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 66: Goodell & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	1123	334
v/c Ratio	0.29	0.57
Control Delay	7.2	30.2
Queue Delay	0.0	0.0
Total Delay	7.2	30.2
Queue Length 50th (ft)	65	158
Queue Length 95th (ft)	82	244
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3884	582
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.29	0.57

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	130	10	25	140	35	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.990				0.959	
Flt Protected				0.992	0.966	
Satd. Flow (prot)	1844	0	0	1848	1726	0
Flt Permitted				0.992	0.966	
Satd. Flow (perm)	1844	0	0	1848	1726	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	293			342	355	
Travel Time (s)	6.7			7.8	8.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	144	11	28	156	39	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	0	0	184	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	130	10	25	140	35	15
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)	144	11	28	156	39	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	293			342		
pX, platoon unblocked						
vC, conflicting volume			156		361	150
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			156		361	150
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		94	98
cM capacity (veh/h)			1425		625	896

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	156	183	56
Volume Left	0	28	39
Volume Right	11	0	17
cSH	1700	1425	688
Volume to Capacity	0.09	0.02	0.08
Queue Length 95th (ft)	0	1	7
Control Delay (s)	0.0	1.3	10.7
Lane LOS		A	B
Approach Delay (s)	0.0	1.3	10.7
Approach LOS			B

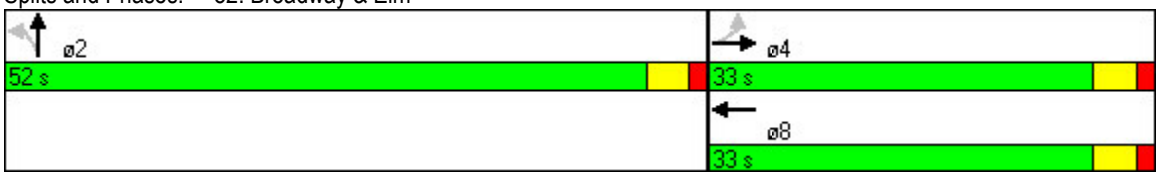
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	145	0	0	85	25	15	1285	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.966			0.996				
Flt Protected		0.976						0.999				
Satd. Flow (prot)	0	3454	0	0	3419	0	0	5060	0	0	0	0
Flt Permitted		0.758						0.999				
Satd. Flow (perm)	0	2683	0	0	3419	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					28			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			219			461			734	
Travel Time (s)		9.5			5.0			10.5			16.7	
Peak Hour Factor	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)	156	161	0	0	94	28	17	1428	39	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	317	0	0	122	0	0	1484	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	23.0	23.0			23.0		41.0	41.0				
Total Split (s)	33.0	33.0	0.0	0.0	33.0	0.0	52.0	52.0	0.0	0.0	0.0	0.0
Total Split (%)	38.8%	38.8%	0.0%	0.0%	38.8%	0.0%	61.2%	61.2%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	28.3	28.3			28.3		47.3	47.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			48.3				
Actuated g/C Ratio		0.34			0.34			0.57				
v/c Ratio		0.34			0.10			0.52				
Control Delay		8.2			14.8			4.3				
Queue Delay		0.0			0.0			0.1				
Total Delay		8.2			14.8			4.3				
LOS		A			B			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.2			14.8			4.3				
Approach LOS		A			B			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 40 (47%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 47.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 82: Broadway & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	317	122	1484
v/c Ratio	0.34	0.10	0.52
Control Delay	8.2	14.8	4.3
Queue Delay	0.0	0.0	0.1
Total Delay	8.2	14.8	4.3
Queue Length 50th (ft)	18	17	48
Queue Length 95th (ft)	m27	36	50
Internal Link Dist (ft)	339	139	381
Turn Bay Length (ft)			
Base Capacity (vph)	925	1197	2879
Starvation Cap Reductn	0	0	202
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.34	0.10	0.55

Intersection Summary

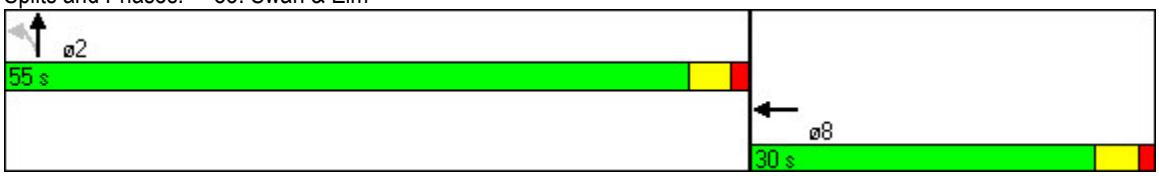
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	250	90	95	635	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.91	1.00	1.00	1.00
Frt					0.968			0.996				
Flt Protected							0.950	0.999				
Satd. Flow (prot)	0	0	0	0	1839	0	1552	4878	0	0	0	0
Flt Permitted							0.950	0.999				
Satd. Flow (perm)	0	0	0	0	1839	0	1552	4878	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					20		112	14				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			208			801			316	
Travel Time (s)		8.2			4.7			18.2			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.71	0.81	0.76	0.81	0.88	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	0	0	352	111	125	784	23	0	0	0
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	0	0	0	0	463	0	112	820	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					21.2		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		50.4	50.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					20		22	22				
Act Effct Green (s)					27.4		52.4	52.4				
Actuated g/C Ratio					0.32		0.62	0.62				
v/c Ratio					0.76		0.11	0.27				
Control Delay					34.6		1.7	7.7				
Queue Delay					0.0		0.0	0.0				
Total Delay					34.6		1.7	7.7				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					C		A	A				
Approach Delay					34.6			6.9				
Approach LOS					C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 83: Swan & Elm



Lane Group	WBT	NBL	NBT
Lane Group Flow (vph)	463	112	820
v/c Ratio	0.76	0.11	0.27
Control Delay	34.6	1.7	7.7
Queue Delay	0.0	0.0	0.0
Total Delay	34.6	1.7	7.7
Queue Length 50th (ft)	211	0	68
Queue Length 95th (ft)	230	12	79
Internal Link Dist (ft)	128		721
Turn Bay Length (ft)			
Base Capacity (vph)	606	1000	3013
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.76	0.11	0.27

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	240	10	80	125	0	0	0	0	50	1795	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.994									0.992	
Flt Protected					0.981						0.999	
Satd. Flow (prot)	0	3518	0	0	3472	0	0	0	0	0	5040	0
Flt Permitted					0.749						0.999	
Satd. Flow (perm)	0	3518	0	0	2651	0	0	0	0	0	5040	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5									18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			419			255			685	
Travel Time (s)		5.1			9.5			5.8			15.6	
Peak Hour Factor	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)	0	267	11	89	139	0	0	0	0	56	1994	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	278	0	0	228	0	0	0	0	0	2167	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		24.0		24.0	24.0					41.0	41.0	
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%
Maximum Green (s)		25.3		25.3	25.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		26.3			26.3						51.3	
Actuated g/C Ratio		0.31			0.31						0.60	
v/c Ratio		0.25			0.28						0.71	
Control Delay		22.4			19.3						5.6	
Queue Delay		0.0			0.0						0.0	
Total Delay		22.4			19.3						5.6	
LOS		C			B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.4			19.3						5.6	
Approach LOS		C			B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 33 (39%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 8.5	Intersection LOS: A
Intersection Capacity Utilization 60.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 84: Broadway & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	278	228	2167
v/c Ratio	0.25	0.28	0.71
Control Delay	22.4	19.3	5.6
Queue Delay	0.0	0.0	0.0
Total Delay	22.4	19.3	5.6
Queue Length 50th (ft)	56	37	47
Queue Length 95th (ft)	88	57	53
Internal Link Dist (ft)	146	339	605
Turn Bay Length (ft)			
Base Capacity (vph)	1092	820	3049
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.25	0.28	0.71

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	425	195	165	0	0	0	0	0	2220	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.86	0.86
Frt			0.850								0.992	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			10	6							26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			359			115			332	
Travel Time (s)		8.0			8.2			2.6			7.5	
Peak Hour Factor	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)	0	0	472	217	183	0	0	0	0	0	2467	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	472	217	183	0	0	0	0	0	2600	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			custom	Perm								
Protected Phases					8						6	
Permitted Phases			4	8								
Minimum Split (s)			20.8	20.8	20.8						50.0	
Total Split (s)	0.0	0.0	26.0	26.0	26.0	0.0	0.0	0.0	0.0	0.0	59.0	0.0
Total Split (%)	0.0%	0.0%	30.6%	30.6%	30.6%	0.0%	0.0%	0.0%	0.0%	0.0%	69.4%	0.0%
Maximum Green (s)			21.2	21.2	21.2						54.2	
Yellow Time (s)			3.2	3.2	3.2						3.2	
All-Red Time (s)			1.6	1.6	1.6						1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.8	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)			5.0	5.0	5.0						5.0	
Flash Dont Walk (s)			11.0	11.0	11.0						11.0	
Pedestrian Calls (#/hr)			0	0	0						0	
Act Effct Green (s)			22.2	22.2	22.2						55.2	
Actuated g/C Ratio			0.26	0.26	0.26						0.65	
v/c Ratio			0.64	0.46	0.20						0.63	
Control Delay			32.0	35.8	32.7						3.7	
Queue Delay			0.0	0.0	0.0						0.0	
Total Delay			32.0	35.8	32.7						3.7	
LOS			C	D	C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					34.4						3.7	
Approach LOS					C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 75 (88%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 85: Swan & Oak

Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	472	217	183	2600
v/c Ratio	0.64	0.46	0.20	0.63
Control Delay	32.0	35.8	32.7	3.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	32.0	35.8	32.7	3.7
Queue Length 50th (ft)	124	81	36	73
Queue Length 95th (ft)	181	m129	m57	79
Internal Link Dist (ft)			279	252
Turn Bay Length (ft)				
Base Capacity (vph)	735	467	924	4137
Starvation Cap Reductn	0	0	0	135
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.64	0.46	0.20	0.65

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	115	150	60	70	0	0	0	0	15	1735	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.924									0.998	
Flt Protected					0.977							
Satd. Flow (prot)	0	1721	0	0	1820	0	0	0	0	0	5075	0
Flt Permitted					0.666							
Satd. Flow (perm)	0	1721	0	0	1241	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14									4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			458			685			413	
Travel Time (s)		10.0			10.4			15.6			9.4	
Peak Hour Factor	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)	0	128	167	67	78	0	0	0	0	17	1928	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	295	0	0	145	0	0	0	0	0	1973	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%
Maximum Green (s)		25.3		25.3	25.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		26.3			26.3						51.3	
Actuated g/C Ratio		0.31			0.31						0.60	
v/c Ratio		0.54			0.38						0.64	
Control Delay		27.6			23.2						4.2	
Queue Delay		0.0			0.0						0.0	
Total Delay		27.6			23.2						4.2	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		27.6			23.2						4.2	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 18 (21%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 86: Huron & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	295	145	1973
v/c Ratio	0.54	0.38	0.64
Control Delay	27.6	23.2	4.2
Queue Delay	0.0	0.0	0.0
Total Delay	27.6	23.2	4.2
Queue Length 50th (ft)	124	57	31
Queue Length 95th (ft)	203	111	35
Internal Link Dist (ft)	360	378	333
Turn Bay Length (ft)			
Base Capacity (vph)	542	384	3064
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.54	0.38	0.64

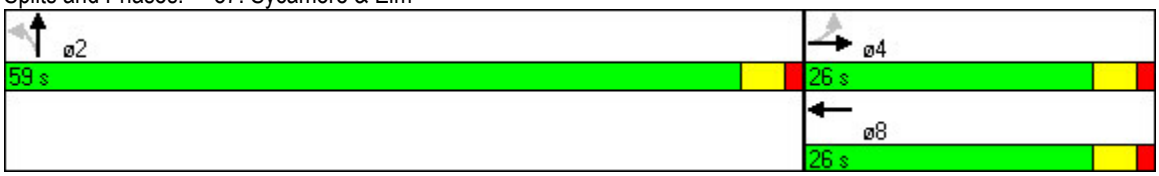
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	60	0	0	55	15	35	1390	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.971			0.997				
Flt Protected		0.969						0.999				
Satd. Flow (prot)	0	1805	0	0	1809	0	0	5065	0	0	0	0
Flt Permitted		0.766						0.999				
Satd. Flow (perm)	0	1427	0	0	1809	0	0	5065	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					16			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		458			231			734			379	
Travel Time (s)		10.4			5.3			16.7			8.6	
Peak Hour Factor	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)	117	67	0	0	61	17	39	1544	28	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	184	0	0	78	0	0	1611	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.7	20.7			20.7		45.0	45.0				
Total Split (s)	26.0	26.0	0.0	0.0	26.0	0.0	59.0	59.0	0.0	0.0	0.0	0.0
Total Split (%)	30.6%	30.6%	0.0%	0.0%	30.6%	0.0%	69.4%	69.4%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	21.3	21.3			21.3		54.3	54.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		22.3			22.3			55.3				
Actuated g/C Ratio		0.26			0.26			0.65				
v/c Ratio		0.49			0.16			0.49				
Control Delay		39.5			20.9			5.9				
Queue Delay		0.0			0.0			0.0				
Total Delay		39.5			20.9			5.9				
LOS		D			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		39.5			20.9			5.9				
Approach LOS		D			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 68 (80%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 9.8	Intersection LOS: A
Intersection Capacity Utilization 50.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 87: Sycamore & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	184	78	1611
v/c Ratio	0.49	0.16	0.49
Control Delay	39.5	20.9	5.9
Queue Delay	0.0	0.0	0.0
Total Delay	39.5	20.9	5.9
Queue Length 50th (ft)	100	25	95
Queue Length 95th (ft)	m165	60	121
Internal Link Dist (ft)	378	151	654
Turn Bay Length (ft)			
Base Capacity (vph)	374	486	3297
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.49	0.16	0.49

Intersection Summary

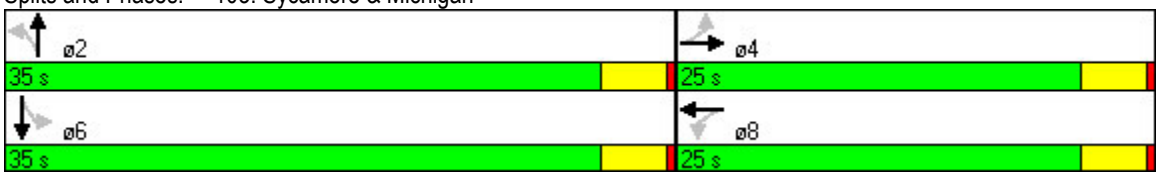
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	60	10	15	55	25	5	410	20	15	195	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.982			0.964			0.993			0.993	
Flt Protected		0.996			0.992			0.999			0.997	
Satd. Flow (prot)	0	1659	0	0	1652	0	0	3511	0	0	3437	0
Flt Permitted		0.986			0.962			0.952			0.920	
Satd. Flow (perm)	0	1643	0	0	1602	0	0	3346	0	0	3171	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			28			12			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		253			667			808			873	
Travel Time (s)		5.8			15.2			18.4			19.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	12%	12%	12%	10%	10%	10%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	6	67	11	17	61	28	6	456	22	17	217	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	106	0	0	484	0	0	245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.14			0.18			0.28			0.15	
Control Delay		12.8			11.5			6.8			7.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.8			11.5			6.8			7.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		12.8			11.5			6.8			7.5	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 33.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: Sycamore & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	84	106	484	245
v/c Ratio	0.14	0.18	0.28	0.15
Control Delay	12.8	11.5	6.8	7.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.8	11.5	6.8	7.5
Queue Length 50th (ft)	18	19	36	21
Queue Length 95th (ft)	44	48	51	37
Internal Link Dist (ft)	173	587	728	793
Turn Bay Length (ft)				
Base Capacity (vph)	582	579	1735	1644
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.14	0.18	0.28	0.15

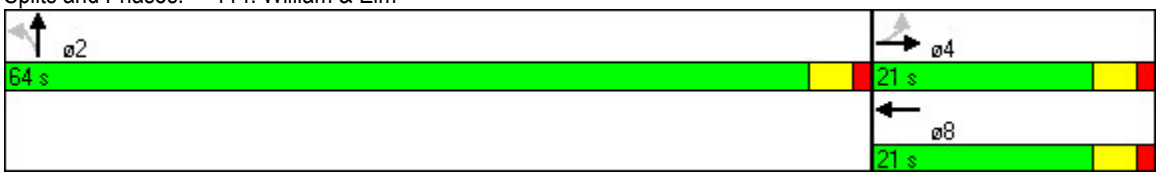
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	190	0	0	85	25	25	1335	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.966			0.998				
Flt Protected		0.992						0.999				
Satd. Flow (prot)	0	3511	0	0	3419	0	0	5070	0	0	0	0
Flt Permitted		0.892						0.999				
Satd. Flow (perm)	0	3157	0	0	3419	0	0	5070	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					28			5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		371			191			308			461	
Travel Time (s)		8.4			4.3			7.0			10.5	
Peak Hour Factor	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)	39	211	0	0	94	28	28	1483	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	250	0	0	122	0	0	1528	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	21.0	21.0	0.0	0.0	21.0	0.0	64.0	64.0	0.0	0.0	0.0	0.0
Total Split (%)	24.7%	24.7%	0.0%	0.0%	24.7%	0.0%	75.3%	75.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.3	16.3			16.3		59.3	59.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.3			17.3			60.3				
Actuated g/C Ratio		0.20			0.20			0.71				
v/c Ratio		0.39			0.17			0.42				
Control Delay		28.6			22.1			3.7				
Queue Delay		0.0			0.0			0.1				
Total Delay		28.6			22.1			3.9				
LOS		C			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		28.6			22.1			3.9				
Approach LOS		C			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 39 (46%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 42.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 114: William & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	250	122	1528
v/c Ratio	0.39	0.17	0.42
Control Delay	28.6	22.1	3.7
Queue Delay	0.0	0.0	0.1
Total Delay	28.6	22.1	3.9
Queue Length 50th (ft)	52	21	30
Queue Length 95th (ft)	80	44	39
Internal Link Dist (ft)	291	111	228
Turn Bay Length (ft)			
Base Capacity (vph)	643	718	3598
Starvation Cap Reductn	0	0	832
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.39	0.17	0.55

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	55	45	80	115	0	0	0	0	45	1850	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.932									0.999	
Flt Protected					0.980						0.999	
Satd. Flow (prot)	0	3299	0	0	3468	0	0	0	0	0	5075	0
Flt Permitted					0.797						0.999	
Satd. Flow (perm)	0	3299	0	0	2821	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		507			371			297			255	
Travel Time (s)		11.5			8.4			6.8			5.8	
Peak Hour Factor	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)	0	61	50	89	128	0	0	0	0	50	2056	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	217	0	0	0	0	0	2117	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	26.0	0.0	26.0	26.0	0.0	0.0	0.0	0.0	59.0	59.0	0.0
Total Split (%)	0.0%	30.6%	0.0%	30.6%	30.6%	0.0%	0.0%	0.0%	0.0%	69.4%	69.4%	0.0%
Maximum Green (s)		21.3		21.3	21.3					54.3	54.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		22.3			22.3						55.3	
Actuated g/C Ratio		0.26			0.26						0.65	
v/c Ratio		0.13			0.29						0.64	
Control Delay		21.4			21.4						1.7	
Queue Delay		0.0			0.0						0.1	
Total Delay		21.4			21.4						1.9	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		21.4			21.4						1.9	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 37 (44%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 4.5	Intersection LOS: A
Intersection Capacity Utilization 54.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 115: William & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	111	217	2117
v/c Ratio	0.13	0.29	0.64
Control Delay	21.4	21.4	1.7
Queue Delay	0.0	0.0	0.1
Total Delay	21.4	21.4	1.9
Queue Length 50th (ft)	20	36	21
Queue Length 95th (ft)	41	55	24
Internal Link Dist (ft)	427	291	175
Turn Bay Length (ft)			
Base Capacity (vph)	876	740	3302
Starvation Cap Reductn	0	0	308
Spillback Cap Reductn	0	0	261
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.13	0.29	0.71

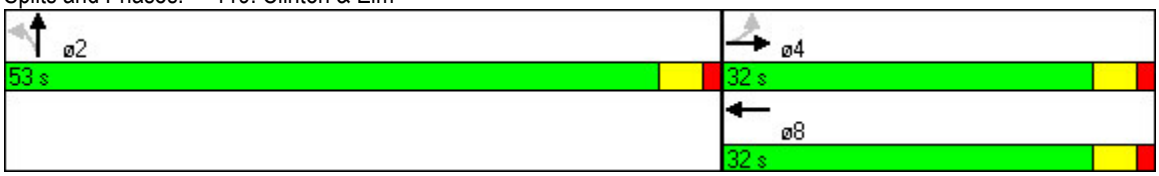
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	135	0	0	40	20	20	1220	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.946			0.998				
Flt Protected		0.973						0.999				
Satd. Flow (prot)	0	1824	0	0	1797	0	0	5026	0	0	0	0
Flt Permitted		0.770						0.999				
Satd. Flow (perm)	0	1444	0	0	1797	0	0	5026	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					37			4				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			191			734			308	
Travel Time (s)		8.2			4.3			16.7			7.0	
Peak Hour Factor	0.68	0.78	0.90	0.90	0.73	0.54	0.58	0.94	0.58	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	2%	2%	0%	0%	0%	3%	0%	2%	2%	2%
Adj. Flow (vph)	213	173	0	0	55	37	34	1298	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	386	0	0	92	0	0	1349	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.2	21.2			21.2		48.0	48.0				
Total Split (s)	32.0	32.0	0.0	0.0	32.0	0.0	53.0	53.0	0.0	0.0	0.0	0.0
Total Split (%)	37.6%	37.6%	0.0%	0.0%	37.6%	0.0%	62.4%	62.4%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	27.3	27.3			27.3		48.3	48.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.7	2.7	3.0	3.0	2.7	3.0	2.7	2.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			50.3				
Actuated g/C Ratio		0.34			0.34			0.59				
v/c Ratio		0.78			0.14			0.45				
Control Delay		45.2			13.1			5.4				
Queue Delay		0.3			0.0			0.0				
Total Delay		45.6			13.1			5.4				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D			B			A				
Approach Delay		45.6			13.1			5.4				
Approach LOS		D			B			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 31 (36%), Referenced to phase 2:NBTL and 6:, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 52.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 119: Clinton & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	386	92	1349
v/c Ratio	0.78	0.14	0.45
Control Delay	45.2	13.1	5.4
Queue Delay	0.3	0.0	0.0
Total Delay	45.6	13.1	5.4
Queue Length 50th (ft)	180	20	17
Queue Length 95th (ft)	232	39	26
Internal Link Dist (ft)	279	111	654
Turn Bay Length (ft)			
Base Capacity (vph)	498	644	2976
Starvation Cap Reductn	8	0	0
Spillback Cap Reductn	0	0	61
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.79	0.14	0.46

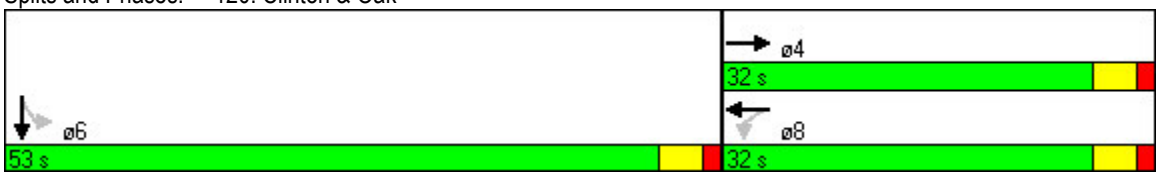
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	215	185	25	40	0	0	0	0	40	1915	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.938									0.999	
Flt Protected					0.981						0.999	
Satd. Flow (prot)	0	1747	0	0	1827	0	0	0	0	0	5075	0
Flt Permitted					0.691						0.999	
Satd. Flow (perm)	0	1747	0	0	1287	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		520			359			762			297	
Travel Time (s)		11.8			8.2			17.3			6.8	
Peak Hour Factor	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)	0	239	206	28	44	0	0	0	0	44	2128	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	445	0	0	72	0	0	0	0	0	2189	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					48.0	48.0	
Total Split (s)	0.0	32.0	0.0	32.0	32.0	0.0	0.0	0.0	0.0	53.0	53.0	0.0
Total Split (%)	0.0%	37.6%	0.0%	37.6%	37.6%	0.0%	0.0%	0.0%	0.0%	62.4%	62.4%	0.0%
Maximum Green (s)		27.3		27.3	27.3					48.3	48.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		28.3			28.3						49.3	
Actuated g/C Ratio		0.33			0.33						0.58	
v/c Ratio		0.76			0.17						0.74	
Control Delay		34.9			22.5						6.0	
Queue Delay		0.6			0.0						0.1	
Total Delay		35.5			22.5						6.1	
LOS		D			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.5			22.5						6.1	
Approach LOS		D			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 47 (55%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 69.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 120: Clinton & Oak



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	445	72	2189
v/c Ratio	0.76	0.17	0.74
Control Delay	34.9	22.5	6.0
Queue Delay	0.6	0.0	0.1
Total Delay	35.5	22.5	6.1
Queue Length 50th (ft)	207	31	30
Queue Length 95th (ft)	#348	69	34
Internal Link Dist (ft)	440	279	217
Turn Bay Length (ft)			
Base Capacity (vph)	586	428	2944
Starvation Cap Reductn	0	0	61
Spillback Cap Reductn	22	0	20
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.79	0.17	0.76

Intersection Summary

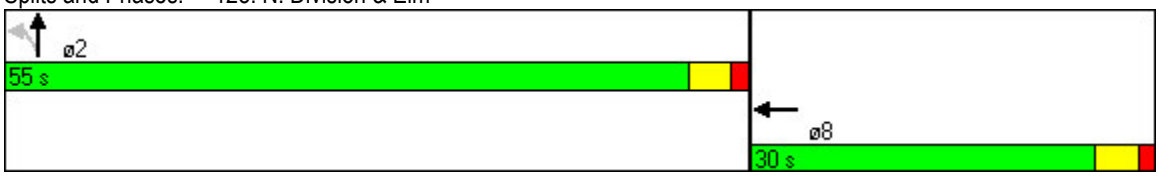
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	70	80	135	1130	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.920							
Flt Protected								0.995				
Satd. Flow (prot)	0	0	0	0	3256	0	0	5060	0	0	0	0
Flt Permitted								0.995				
Satd. Flow (perm)	0	0	0	0	3256	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					68			44				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		349			195			317			734	
Travel Time (s)		7.9			4.4			7.2			16.7	
Peak Hour Factor	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)	0	0	0	0	78	89	150	1256	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	167	0	0	1406	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					20.6		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		50.4	50.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					26.4			51.4				
Actuated g/C Ratio					0.31			0.60				
v/c Ratio					0.16			0.46				
Control Delay					13.1			12.5				
Queue Delay					0.0			0.2				
Total Delay					13.1			12.8				
LOS					B			B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					13.1			12.8				
Approach LOS					B			B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 10 (12%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 35.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 128: N. Division & Elm



Lane Group	WBT	NBT
Lane Group Flow (vph)	167	1406
v/c Ratio	0.16	0.46
Control Delay	13.1	12.5
Queue Delay	0.0	0.2
Total Delay	13.1	12.8
Queue Length 50th (ft)	19	201
Queue Length 95th (ft)	42	126
Internal Link Dist (ft)	115	237
Turn Bay Length (ft)		
Base Capacity (vph)	1058	3077
Starvation Cap Reductn	0	802
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.16	0.62

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	65	75	0	0	0	0	0	1970	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.998	
Flt Protected					0.977							
Satd. Flow (prot)	0	0	0	0	4968	0	0	0	0	0	5075	0
Flt Permitted					0.977							
Satd. Flow (perm)	0	0	0	0	4968	0	0	0	0	0	5075	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					5						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			349			277			762	
Travel Time (s)		8.2			7.9			6.3			17.3	
Peak Hour Factor	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)	0	0	0	72	83	0	0	0	0	0	2189	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	155	0	0	0	0	0	2217	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.7	20.7						50.0	
Total Split (s)	0.0	0.0	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	52.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	38.8%	38.8%	0.0%	0.0%	0.0%	0.0%	0.0%	61.2%	0.0%
Maximum Green (s)				28.3	28.3						47.3	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.5	1.5						1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					29.3						48.3	
Actuated g/C Ratio					0.34						0.57	
v/c Ratio					0.09						0.77	
Control Delay					16.1						6.8	
Queue Delay					0.0						0.0	
Total Delay					16.1						6.8	
LOS					B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					16.1						6.8	
Approach LOS					B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 66 (78%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 48.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 129: N. Division & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	155	2217
v/c Ratio	0.09	0.77
Control Delay	16.1	6.8
Queue Delay	0.0	0.0
Total Delay	16.1	6.8
Queue Length 50th (ft)	20	46
Queue Length 95th (ft)	33	52
Internal Link Dist (ft)	269	682
Turn Bay Length (ft)		
Base Capacity (vph)	1716	2886
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.09	0.77

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	545	165	0	0	0	0	0	760	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.998				
Flt Protected	0.950	0.970										
Satd. Flow (prot)	1610	3288	0	0	0	0	0	5075	0	0	0	0
Flt Permitted	0.950	0.970										
Satd. Flow (perm)	1610	3288	0	0	0	0	0	5075	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	168	168						4				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			206			316			317	
Travel Time (s)		7.8			4.7			7.2			7.2	
Peak Hour Factor	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)	606	183	0	0	0	0	0	844	11	0	0	0
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	303	486	0	0	0	0	0	855	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	21.0	21.0						50.0				
Total Split (s)	31.0	31.0	0.0	0.0	0.0	0.0	0.0	54.0	0.0	0.0	0.0	0.0
Total Split (%)	36.5%	36.5%	0.0%	0.0%	0.0%	0.0%	0.0%	63.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	26.4	26.4						49.4				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	1.4	1.4						1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	27.4	27.4						50.4				
Actuated g/C Ratio	0.32	0.32						0.59				
v/c Ratio	0.48	0.41						0.28				
Control Delay	10.2	7.9						4.0				
Queue Delay	0.7	0.0						0.1				
Total Delay	10.9	7.9						4.1				
LOS	B	A						A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.0						4.1				
Approach LOS		A						A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 5 (6%), Referenced to phase 2:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 135: S Division & Elm

Lane Group	EBL	EBT	NBT
Lane Group Flow (vph)	303	486	855
v/c Ratio	0.48	0.41	0.28
Control Delay	10.2	7.9	4.0
Queue Delay	0.7	0.0	0.1
Total Delay	10.9	7.9	4.1
Queue Length 50th (ft)	134	107	30
Queue Length 95th (ft)	221	154	35
Internal Link Dist (ft)		265	236
Turn Bay Length (ft)			
Base Capacity (vph)	633	1174	3011
Starvation Cap Reductn	121	0	971
Spillback Cap Reductn	5	2	157
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.59	0.41	0.42

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	620	395	0	0	0	0	0	0	90	1945	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									
Flt Protected											0.998	
Satd. Flow (prot)	0	5085	1583	0	0	0	0	0	0	0	6395	0
Flt Permitted											0.998	
Satd. Flow (perm)	0	5085	1583	0	0	0	0	0	0	0	6395	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			7								19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		208			345			332			277	
Travel Time (s)		4.7			7.8			7.5			6.3	
Peak Hour Factor	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)	0	689	439	0	0	0	0	0	0	100	2161	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	689	439	0	0	0	0	0	0	0	2261	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		20.8	20.8							50.0	50.0	
Total Split (s)	0.0	31.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	54.0	54.0	0.0
Total Split (%)	0.0%	36.5%	36.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	63.5%	63.5%	0.0%
Maximum Green (s)		26.2	26.2							49.2	49.2	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.6	1.6							1.6	1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.0	3.8	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		27.2	27.2								50.2	
Actuated g/C Ratio		0.32	0.32								0.59	
v/c Ratio		0.42	0.86								0.60	
Control Delay		23.7	45.3								1.3	
Queue Delay		0.0	0.0								0.2	
Total Delay		23.7	45.3								1.6	
LOS		C	D								A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		32.1									1.6	
Approach LOS		C									A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 72 (85%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 60.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 136: S Division & Oak

Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	689	439	2261
v/c Ratio	0.42	0.86	0.60
Control Delay	23.7	45.3	1.3
Queue Delay	0.0	0.0	0.2
Total Delay	23.7	45.3	1.6
Queue Length 50th (ft)	105	215	11
Queue Length 95th (ft)	138	#384	12
Internal Link Dist (ft)	128		197
Turn Bay Length (ft)			
Base Capacity (vph)	1627	511	3785
Starvation Cap Reductn	0	0	656
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.42	0.86	0.72

Intersection Summary

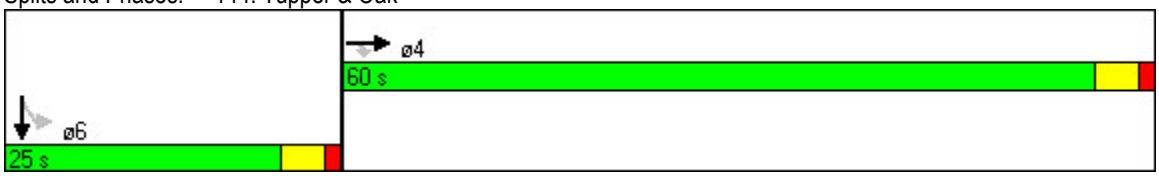
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1600	255	0	0	0	0	0	0	170	290	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									
Flt Protected											0.982	
Satd. Flow (prot)	0	3539	1583	0	0	0	0	0	0	0	3476	0
Flt Permitted											0.982	
Satd. Flow (perm)	0	3539	1583	0	0	0	0	0	0	0	3476	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			205								29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		351			380			611			685	
Travel Time (s)		8.0			8.6			13.9			15.6	
Peak Hour Factor	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)	0	1778	283	0	0	0	0	0	0	189	322	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1778	283	0	0	0	0	0	0	0	511	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		45.0	45.0							20.6	20.6	
Total Split (s)	0.0	60.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0
Total Split (%)	0.0%	70.6%	70.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.4%	29.4%	0.0%
Maximum Green (s)		55.4	55.4							20.4	20.4	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.4	1.4							1.4	1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		56.4	56.4								21.4	
Actuated g/C Ratio		0.66	0.66								0.25	
v/c Ratio		0.76	0.25								0.57	
Control Delay		13.4	1.4								19.8	
Queue Delay		0.5	0.3								0.0	
Total Delay		13.9	1.8								19.8	
LOS		B	A								B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		12.2									19.8	
Approach LOS		B									B	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 13.7	Intersection LOS: B
Intersection Capacity Utilization 63.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 144: Tupper & Oak



Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	1778	283	511
v/c Ratio	0.76	0.25	0.57
Control Delay	13.4	1.4	19.8
Queue Delay	0.5	0.3	0.0
Total Delay	13.9	1.8	19.8
Queue Length 50th (ft)	403	0	60
Queue Length 95th (ft)	517	m15	104
Internal Link Dist (ft)	271		605
Turn Bay Length (ft)			
Base Capacity (vph)	2348	1119	897
Starvation Cap Reductn	195	393	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.83	0.39	0.57

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	1240	10	0	0	0	0	140	195	175	135	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor		1.00										
Frt		0.998						0.950	0.850			
Flt Protected		0.999									0.976	
Satd. Flow (prot)	0	5156	0	0	0	0	0	1670	1504	0	2802	0
Flt Permitted		0.999									0.640	
Satd. Flow (perm)	0	5156	0	0	0	0	0	1670	1504	0	1837	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4						31	43			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	30	1476	20	0	0	0	0	159	291	254	270	0
Shared Lane Traffic (%)									27%			
Lane Group Flow (vph)	0	1526	0	0	0	0	0	238	212	0	524	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	35.3%	35.3%	35.3%	0.0%
Maximum Green (s)	50.4	50.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		52.4						27.4	27.4		27.4	
Actuated g/C Ratio		0.62						0.32	0.32		0.32	
v/c Ratio		0.48						0.43	0.41		0.91dl	
Control Delay		5.1						22.4	20.6		48.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.1						0.0	0.0		0.0	
Total Delay		5.2						22.4	20.7		48.4	
LOS		A						C	C		D	
Approach Delay		5.2						21.6			48.4	
Approach LOS		A						C			D	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 38 (45%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 55.5%	ICU Level of Service B
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 145: Tupper & Ellicott

Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	1526	238	212	524
v/c Ratio	0.48	0.43	0.41	0.91dl
Control Delay	5.1	22.4	20.6	48.4
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	5.2	22.4	20.7	48.4
Queue Length 50th (ft)	51	89	71	114
Queue Length 95th (ft)	59	153	89	88
Internal Link Dist (ft)	262	271		652
Turn Bay Length (ft)				
Base Capacity (vph)	3180	559	514	592
Starvation Cap Reductn	411	0	0	0
Spillback Cap Reductn	577	3	5	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.59	0.43	0.42	0.89

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1185	75	0	0	0	0	130	85	155	150	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988							0.850			
Flt Protected		0.999								0.950		
Satd. Flow (prot)	0	5074	0	0	0	0	0	1900	1615	1787	1863	0
Flt Permitted		0.999								0.580		
Satd. Flow (perm)	0	5074	0	0	0	0	0	1900	1615	1091	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30							63			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			342			356			718	
Travel Time (s)		6.5			7.8			8.1			16.3	
Peak Hour Factor	0.50	0.90	0.67	0.90	0.90	0.90	0.90	0.80	0.94	0.76	0.73	0.90
Heavy Vehicles (%)	0%	1%	0%	2%	2%	2%	2%	0%	0%	1%	2%	2%
Adj. Flow (vph)	20	1317	112	0	0	0	0	162	90	204	205	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1449	0	0	0	0	0	162	90	204	205	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	35.3%	35.3%	35.3%	0.0%
Maximum Green (s)	50.4	50.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	3.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		52.4						27.4	26.4	27.4	27.4	
Actuated g/C Ratio		0.62						0.32	0.31	0.32	0.32	
v/c Ratio		0.46						0.26	0.17	0.58	0.34	
Control Delay		0.5						22.8	9.7	45.1	36.5	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		0.5						22.8	9.7	45.1	36.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A						C	A	D	D	
Approach Delay		0.5						18.1			40.8	
Approach LOS		A						B			D	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 31 (36%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 50.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 146: Tupper & Washington

Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1449	162	90	204	205
v/c Ratio	0.46	0.26	0.17	0.58	0.34
Control Delay	0.5	22.8	9.7	45.1	36.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.5	22.8	9.7	45.1	36.5
Queue Length 50th (ft)	0	64	10	108	104
Queue Length 95th (ft)	0	98	43	148	135
Internal Link Dist (ft)	208	276			638
Turn Bay Length (ft)					
Base Capacity (vph)	3139	612	545	352	601
Starvation Cap Reductn	230	0	0	0	0
Spillback Cap Reductn	18	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.26	0.17	0.58	0.34

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	1285	0	0	0	0	0	205	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.990				
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3504	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3504	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1						9				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		380			319			560			585	
Travel Time (s)		8.6			7.3			12.7			13.3	
Peak Hour Factor	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)	6	1428	0	0	0	0	0	228	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1434	0	0	0	0	0	245	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	45.0	45.0						21.2				
Total Split (s)	59.0	59.0	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.0	0.0	0.0
Total Split (%)	69.4%	69.4%	0.0%	0.0%	0.0%	0.0%	0.0%	30.6%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	53.8	53.8						20.8				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	2.0	2.0						2.0				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.2	4.2	3.0	3.0	3.0	3.0	3.0	4.2	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		54.8						21.8				
Actuated g/C Ratio		0.64						0.26				
v/c Ratio		0.63						0.27				
Control Delay		4.6						18.6				
Queue Delay		0.4						0.0				
Total Delay		5.0						18.6				
LOS		A						B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		5.0						18.6				
Approach LOS		A						B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 152: Tupper & Elm St

Lane Group	EBT	NBT
Lane Group Flow (vph)	1434	245
v/c Ratio	0.63	0.27
Control Delay	4.6	18.6
Queue Delay	0.4	0.0
Total Delay	5.0	18.6
Queue Length 50th (ft)	81	25
Queue Length 95th (ft)	86	51
Internal Link Dist (ft)	300	480
Turn Bay Length (ft)		
Base Capacity (vph)	2282	905
Starvation Cap Reductn	334	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.74	0.27

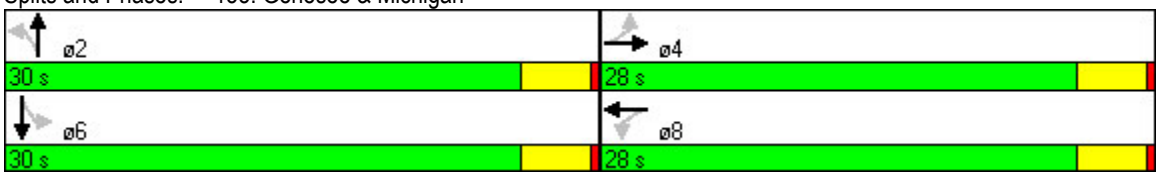
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	135	20	10	100	25	10	310	30	55	155	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.984			0.975			0.987			0.981	
Flt Protected		0.992			0.996			0.999			0.989	
Satd. Flow (prot)	0	3455	0	0	1809	0	0	3490	0	0	3434	0
Flt Permitted		0.907			0.980			0.947			0.826	
Satd. Flow (perm)	0	3159	0	0	1780	0	0	3308	0	0	2868	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			25			22			33	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			1157			873			441	
Travel Time (s)		11.8			26.3			19.8			10.0	
Peak Hour Factor	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)	33	150	22	11	111	28	11	344	33	61	172	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	205	0	0	150	0	0	388	0	0	266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	48.3%	48.3%	0.0%	48.3%	48.3%	0.0%	51.7%	51.7%	0.0%	51.7%	51.7%	0.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		25.0			25.0			27.0			27.0	
Actuated g/C Ratio		0.43			0.43			0.47			0.47	
v/c Ratio		0.15			0.19			0.25			0.20	
Control Delay		9.3			9.3			9.3			8.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.3			9.3			9.3			8.4	
LOS		A			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.3			9.3			9.3			8.4	
Approach LOS		A			A			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.25	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 41.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 155: Genesee & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	205	150	388	266
v/c Ratio	0.15	0.19	0.25	0.20
Control Delay	9.3	9.3	9.3	8.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.3	9.3	9.3	8.4
Queue Length 50th (ft)	18	25	37	23
Queue Length 95th (ft)	36	55	61	42
Internal Link Dist (ft)	438	1077	793	361
Turn Bay Length (ft)				
Base Capacity (vph)	1374	781	1552	1353
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.19	0.25	0.20

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	155	500	105	15	5	45	280	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	
Flt Protected		0.988				0.983		
Satd. Flow (prot)	0	5049	1538	0	0	1742	2731	0
Flt Permitted		0.988				0.983		
Satd. Flow (perm)	0	5049	1538	0	0	1742	2731	0
Right Turn on Red								Yes
Satd. Flow (RTOR)							50	
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	191	575	114	21	8	55	311	114
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	766	114	0	0	84	425	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	
Total Split (s)	60.0	60.0	60.0	25.0	25.0	25.0	25.0	0.0
Total Split (%)	70.6%	70.6%	70.6%	29.4%	29.4%	29.4%	29.4%	0.0%
Maximum Green (s)	55.4	55.4	55.4	20.4	20.4	20.4	20.4	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	3.5
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	
Act Effct Green (s)		55.4	55.4			20.9	20.9	
Actuated g/C Ratio		0.65	0.65			0.25	0.25	
v/c Ratio		0.23	0.11			0.20	0.60	
Control Delay		9.1	8.5			16.8	29.0	
Queue Delay		0.5	0.0			0.0	0.0	
Total Delay		9.5	8.5			16.8	29.0	

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		A	A			B	C	
Approach Delay		9.4				16.8		
Approach LOS		A				B		

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 8 (9%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 39.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 159: Pearl & Main

Lane Group	WBT	WBR	NBT	SBR
Lane Group Flow (vph)	766	114	84	425
v/c Ratio	0.23	0.11	0.20	0.60
Control Delay	9.1	8.5	16.8	29.0
Queue Delay	0.5	0.0	0.0	0.0
Total Delay	9.5	8.5	16.8	29.0
Queue Length 50th (ft)	69	26	36	100
Queue Length 95th (ft)	m83	m46	66	153
Internal Link Dist (ft)	206		625	
Turn Bay Length (ft)				
Base Capacity (vph)	3291	1002	428	709
Starvation Cap Reductn	1932	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.56	0.11	0.20	0.60

Intersection Summary

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

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	85	1310	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.997				
Satd. Flow (prot)	0	5070	0	0	1863	0
Flt Permitted		0.997				
Satd. Flow (perm)	0	5070	0	0	1863	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		161	288		705	
Travel Time (s)		3.7	6.5		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	1456	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1550	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm					
Protected Phases		4			6	
Permitted Phases	4					
Minimum Split (s)	40.0	40.0			20.6	
Total Split (s)	55.0	55.0	0.0	0.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)	50.4	50.4			25.4	
Yellow Time (s)	3.2	3.2			3.2	
All-Red Time (s)	1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.6	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0	
Act Effct Green (s)		51.4				
Actuated g/C Ratio		0.60				
v/c Ratio		0.51				
Control Delay		10.3				
Queue Delay		0.0				
Total Delay		10.3				
LOS		B				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		10.3				
Approach LOS		B				

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 24 (28%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 30.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 160: Tupper & Main

Lane Group	EBT
Lane Group Flow (vph)	1550
v/c Ratio	0.51
Control Delay	10.3
Queue Delay	0.0
Total Delay	10.3
Queue Length 50th (ft)	156
Queue Length 95th (ft)	191
Internal Link Dist (ft)	81
Turn Bay Length (ft)	
Base Capacity (vph)	3066
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.51

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	115	545	80	40	205	0	0	510	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.984						0.973	
Flt Protected					0.992		0.950					
Satd. Flow (prot)	0	0	0	0	6255	0	1770	1863	0	0	3444	0
Flt Permitted					0.992		0.200					
Satd. Flow (perm)	0	0	0	0	6255	0	373	1863	0	0	3444	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					56						27	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	128	606	89	44	228	0	0	567	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	823	0	44	228	0	0	689	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	15.0	50.0	0.0	0.0	20.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%	17.6%	58.8%	0.0%	0.0%	23.5%	0.0%
Maximum Green (s)				46.0	46.0		11.0				16.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

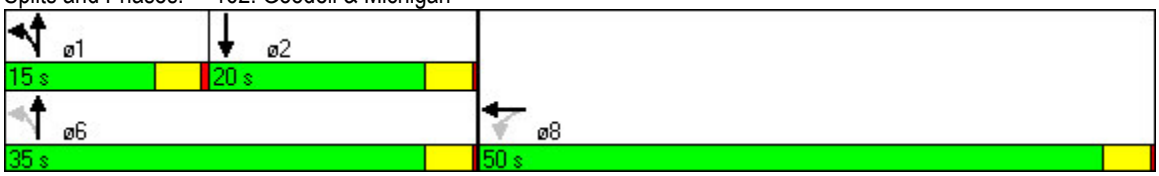
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	35.0
Total Split (%)	41%
Maximum Green (s)	31.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					47.0		31.5	31.5			17.0	
Actuated g/C Ratio					0.56		0.37	0.37			0.20	
v/c Ratio					0.23		0.13	0.33			0.96	
Control Delay					9.1		18.0	20.6			59.9	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					9.1		18.0	20.6			59.9	
LOS					A		B	C			E	
Approach Delay					9.1			20.1			59.9	
Approach LOS					A			C			E	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 84.5
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 30.4 — Intersection LOS: C
Intersection Capacity Utilization 41.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 162: Goodell & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	823	44	228	689
v/c Ratio	0.23	0.13	0.33	0.96
Control Delay	9.1	18.0	20.6	59.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.1	18.0	20.6	59.9
Queue Length 50th (ft)	56	15	85	186
Queue Length 95th (ft)	73	36	141	#302
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	3505	338	705	714
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.23	0.13	0.32	0.96

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	15	705	90	90	100	0	0	235	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00							
Frt					0.983						0.981	
Flt Protected					0.998			0.976				
Satd. Flow (prot)	0	0	0	0	6338	0	0	1818	0	0	1827	0
Flt Permitted					0.998			0.570				
Satd. Flow (perm)	0	0	0	0	6338	0	0	1062	0	0	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					69						10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		326			375			732			791	
Travel Time (s)		7.4			8.5			16.6			18.0	
Confl. Peds. (#/hr)						3						
Peak Hour Factor	0.90	0.90	0.90	0.50	0.85	0.83	0.78	0.88	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	1%	0%	4%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	30	829	108	115	114	0	0	261	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	967	0	0	229	0	0	305	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Minimum Split (s)				40.0	40.0		25.0	25.0			20.6	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	30.0	30.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	35.3%	35.3%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.4	50.4		25.4	25.4			25.4	
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)					52.4			27.4			26.4	
Actuated g/C Ratio					0.62			0.32			0.31	
v/c Ratio					0.25			0.67			0.53	
Control Delay					3.3			25.1			27.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0			0.0			0.0	
Total Delay					3.3			25.1			27.4	
LOS					A			C			C	
Approach Delay					3.3			25.1			27.4	
Approach LOS					A			C			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 43 (51%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 48.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 163: Goodell & Ellicott

Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	967	229	305
v/c Ratio	0.25	0.67	0.53
Control Delay	3.3	25.1	27.4
Queue Delay	0.0	0.0	0.0
Total Delay	3.3	25.1	27.4
Queue Length 50th (ft)	20	52	129
Queue Length 95th (ft)	22	#83	208
Internal Link Dist (ft)	295	652	711
Turn Bay Length (ft)			
Base Capacity (vph)	3934	342	574
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.25	0.67	0.53

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	30	515	10	95	265	0	0	190	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997							0.850
Flt Protected					0.997			0.985				
Satd. Flow (prot)	0	0	0	0	6363	0	0	1782	0	0	1792	1429
Flt Permitted					0.997			0.732				
Satd. Flow (perm)	0	0	0	0	6363	0	0	1324	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					7							26
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	33	579	11	127	294	0	0	218	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	623	0	0	421	0	0	218	26
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	30.0	30.0	0.0	0.0	30.0	30.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	35.3%	35.3%	0.0%	0.0%	35.3%	35.3%
Maximum Green (s)				50.4	50.4		25.4	25.4			25.4	25.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					52.4			27.4			27.4	27.4
Actuated g/C Ratio					0.62			0.32			0.32	0.32
v/c Ratio					0.16			0.99			0.38	0.05
Control Delay					3.7			65.9			24.6	8.4
Queue Delay					0.0			0.0			0.0	0.0
Total Delay					3.7			65.9			24.6	8.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			E			C	A
Approach Delay					3.7			65.9			22.9	
Approach LOS					A			E			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 27.7	Intersection LOS: C
Intersection Capacity Utilization 47.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 164: Goodell & Washington

Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	623	421	218	26
v/c Ratio	0.16	0.99	0.38	0.05
Control Delay	3.7	65.9	24.6	8.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.7	65.9	24.6	8.4
Queue Length 50th (ft)	18	227	89	0
Queue Length 95th (ft)	22	#418	143	7
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3925	427	578	478
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.99	0.38	0.05

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	330	95	55	135	0	0	0	0	35	1740	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.966										0.850
Flt Protected					0.986						0.999	
Satd. Flow (prot)	0	3419	0	0	3490	0	0	0	0	0	5080	1583
Flt Permitted					0.736						0.999	
Satd. Flow (perm)	0	3419	0	0	2605	0	0	0	0	0	5080	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13										156
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			465			349			422	
Travel Time (s)		3.8			10.6			7.9			9.6	
Peak Hour Factor	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)	0	367	106	61	150	0	0	0	0	39	1933	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	473	0	0	211	0	0	0	0	0	1972	156
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Minimum Split (s)		20.9		20.9	20.9					47.0	47.0	47.0
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	55.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	64.7%
Maximum Green (s)		25.1		25.1	25.1					50.1	50.1	50.1
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		1.7		1.7	1.7					1.7	1.7	1.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.9	3.0	3.9	3.9	3.0	3.0	3.0	3.0	3.9	3.9	3.9
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		26.1			26.1						51.1	51.1
Actuated g/C Ratio		0.31			0.31						0.60	0.60
v/c Ratio		0.45			0.26						0.65	0.15
Control Delay		24.6			15.6						15.2	3.3
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		24.6			15.6						15.2	3.3
LOS		C			B						B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		24.6			15.6						14.4	
Approach LOS		C			B						B	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Green, Master Intersection	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 16.2	Intersection LOS: B
Intersection Capacity Utilization 61.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 312: Genesee & Oak

Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	473	211	1972	156
v/c Ratio	0.45	0.26	0.65	0.15
Control Delay	24.6	15.6	15.2	3.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	24.6	15.6	15.2	3.3
Queue Length 50th (ft)	103	28	259	6
Queue Length 95th (ft)	147	m43	317	35
Internal Link Dist (ft)	89	385	342	
Turn Bay Length (ft)				
Base Capacity (vph)	1059	800	3054	1014
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.26	0.65	0.15

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	95	0	0	125	20	50	1765	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.980				0.850			
Flt Protected		0.974						0.999				
Satd. Flow (prot)	0	3447	0	0	3468	0	0	5080	1583	0	0	0
Flt Permitted		0.734						0.999				
Satd. Flow (perm)	0	2598	0	0	3468	0	0	5080	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					14				56			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		465			518			453			260	
Travel Time (s)		10.6			11.8			10.3			5.9	
Peak Hour Factor	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)	122	106	0	0	139	22	56	1961	56	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	0	0	161	0	0	2017	56	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm		Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Minimum Split (s)	24.0	24.0			24.0		42.0	42.0	42.0			
Total Split (s)	29.0	29.0	0.0	0.0	29.0	0.0	56.0	56.0	56.0	0.0	0.0	0.0
Total Split (%)	34.1%	34.1%	0.0%	0.0%	34.1%	0.0%	65.9%	65.9%	65.9%	0.0%	0.0%	0.0%
Maximum Green (s)	24.2	24.2			24.2		51.2	51.2	51.2			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	1.6	1.6			1.6		1.6	1.6	1.6			
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.8	3.8	3.0	3.0	3.8	3.0	3.8	3.8	3.8	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)		25.2			25.2			52.2	52.2			
Actuated g/C Ratio		0.30			0.30			0.61	0.61			
v/c Ratio		0.30			0.16			0.65	0.06			
Control Delay		8.2			20.6			8.3	0.1			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		8.2			20.6			8.3	0.1			
LOS		A			C			A	A			
Approach Delay		8.2			20.6			8.1				
Approach LOS		A			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 4 (5%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 8.9	Intersection LOS: A
Intersection Capacity Utilization 55.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 313: Genesee & Elm St

Lane Group	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	228	161	2017	56
v/c Ratio	0.30	0.16	0.65	0.06
Control Delay	8.2	20.6	8.3	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.2	20.6	8.3	0.1
Queue Length 50th (ft)	12	30	328	0
Queue Length 95th (ft)	18	53	348	m0
Internal Link Dist (ft)	385	438	373	
Turn Bay Length (ft)				200
Base Capacity (vph)	770	1038	3120	994
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.30	0.16	0.65	0.06

Intersection Summary

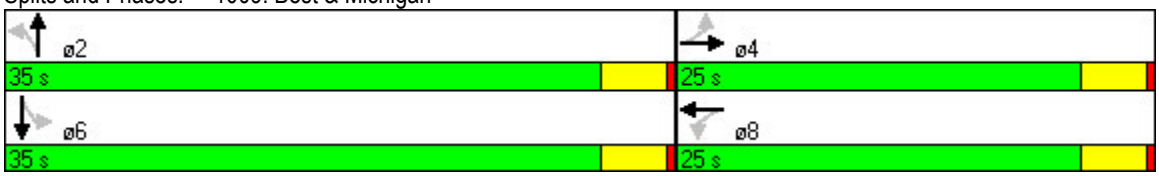
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	250	25	15	120	15	5	105	20	20	60	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.986			0.980			0.991	
Flt Protected		0.999			0.995			0.998			0.989	
Satd. Flow (prot)	0	1839	0	0	1827	0	0	1822	0	0	1826	0
Flt Permitted		0.996			0.959			0.994			0.941	
Satd. Flow (perm)	0	1833	0	0	1761	0	0	1815	0	0	1737	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			11			22			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			349			643			576	
Travel Time (s)		21.9			7.9			14.6			13.1	
Peak Hour Factor	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)	6	278	28	17	133	17	6	117	22	22	67	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312	0	0	167	0	0	145	0	0	95	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
v/c Ratio		0.46			0.26			0.15			0.10	
Control Delay		16.8			13.7			6.5			7.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.8			13.7			6.5			7.0	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		16.8			13.7			6.5			7.0	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 35.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1009: Best & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	312	167	145	95
v/c Ratio	0.46	0.26	0.15	0.10
Control Delay	16.8	13.7	6.5	7.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.8	13.7	6.5	7.0
Queue Length 50th (ft)	81	38	20	14
Queue Length 95th (ft)	143	77	44	33
Internal Link Dist (ft)	884	269	563	496
Turn Bay Length (ft)				
Base Capacity (vph)	678	653	978	929
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.26	0.15	0.10

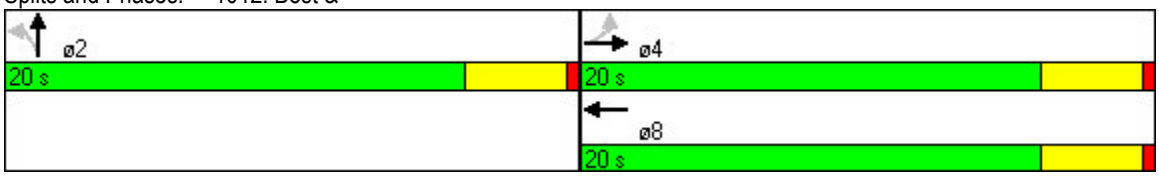
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	260	0	0	105	30	50	65	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.970			0.954				
Flt Protected		0.998						0.985				
Satd. Flow (prot)	0	1859	0	0	1807	0	0	3326	0	0	0	0
Flt Permitted		0.991						0.985				
Satd. Flow (perm)	0	1846	0	0	1807	0	0	3326	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					33			56				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		178			964			653			187	
Travel Time (s)		4.0			21.9			14.8			4.3	
Peak Hour Factor	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)	11	289	0	0	117	33	56	72	56	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	300	0	0	150	0	0	184	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	20.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	0.0%	50.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0			16.0		16.0	16.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.0			17.0			17.0				
Actuated g/C Ratio		0.42			0.42			0.42				
v/c Ratio		0.38			0.19			0.13				
Control Delay		9.7			6.6			5.4				
Queue Delay		0.0			0.0			0.0				
Total Delay		9.7			6.6			5.4				
LOS		A			A			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.7			6.6			5.4				
Approach LOS		A			A			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 40	
Actuated Cycle Length: 40	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 33.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1012: Best &



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	300	150	184
v/c Ratio	0.38	0.19	0.13
Control Delay	9.7	6.6	5.4
Queue Delay	0.0	0.0	0.0
Total Delay	9.7	6.6	5.4
Queue Length 50th (ft)	42	15	8
Queue Length 95th (ft)	84	38	20
Internal Link Dist (ft)	98	884	573
Turn Bay Length (ft)			
Base Capacity (vph)	785	787	1446
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.38	0.19	0.13

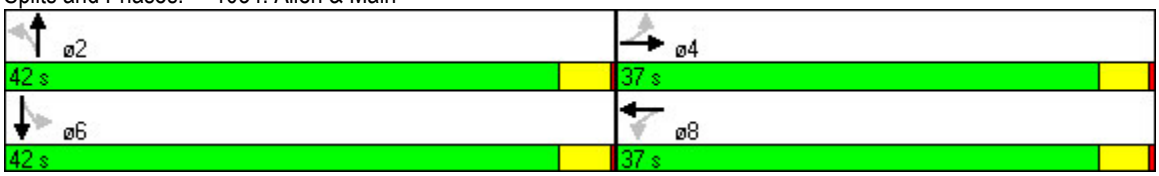
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	15	95	5	20	5	75	475	5	5	260	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.917			0.976			0.999			0.985	
Flt Protected		0.986			0.991			0.993			0.999	
Satd. Flow (prot)	0	1684	0	0	1802	0	0	5045	0	0	3483	0
Flt Permitted		0.921			0.965			0.848			0.946	
Satd. Flow (perm)	0	1573	0	0	1754	0	0	4308	0	0	3298	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		106			6			2			21	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		319			288			287			353	
Travel Time (s)		7.3			6.5			6.5			8.0	
Peak Hour Factor	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)	50	17	106	6	22	6	83	528	6	6	289	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	173	0	0	34	0	0	617	0	0	328	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	37.0	37.0	0.0	37.0	37.0	0.0	42.0	42.0	0.0	42.0	42.0	0.0
Total Split (%)	46.8%	46.8%	0.0%	46.8%	46.8%	0.0%	53.2%	53.2%	0.0%	53.2%	53.2%	0.0%
Maximum Green (s)	33.0	33.0		33.0	33.0		38.0	38.0		38.0	38.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	0.0	-1.0	0.0	0.0	0.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	3.0	4.0	4.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		33.0			33.0			39.0			39.0	
Actuated g/C Ratio		0.42			0.42			0.49			0.49	
v/c Ratio		0.24			0.05			0.29			0.20	
Control Delay		7.3			12.2			12.2			10.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.3			12.2			12.2			10.9	
LOS		A			B			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		7.3			12.2			12.2			10.9	
Approach LOS		A			B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 79	
Actuated Cycle Length: 79	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 44.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1034: Allen & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	173	34	617	328
v/c Ratio	0.24	0.05	0.29	0.20
Control Delay	7.3	12.2	12.2	10.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.3	12.2	12.2	10.9
Queue Length 50th (ft)	20	8	61	42
Queue Length 95th (ft)	57	24	85	65
Internal Link Dist (ft)	239	208	207	273
Turn Bay Length (ft)				
Base Capacity (vph)	719	736	2128	1639
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.24	0.05	0.29	0.20

Intersection Summary

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	235	1625	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.88	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	3539	2787	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	3539	2787	0	0	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	260			560	477	
Travel Time (s)	5.9			12.7	10.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	261	1806	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	261	1806	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.2%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1145	0	0	0	0	1545
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			969	284	
Travel Time (s)	7.3			22.0	6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1272	0	0	0	0	1717
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1272	0	0	0	0	1717
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 92.4%	ICU Level of Service F
Analysis Period (min) 15	

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	545	1465	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	3539	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	422			611	490	
Travel Time (s)	9.6			13.9	11.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	606	1628	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	606	1628	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 152.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	1394	703	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	3433	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	3433	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	223			540	780	
Travel Time (s)	5.1			12.3	17.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	1549	781	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1549	781	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 152.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	215	170	460	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.934			
Flt Protected						0.970
Satd. Flow (prot)	0	0	3306	0	0	3433
Flt Permitted						0.970
Satd. Flow (perm)	0	0	3306	0	0	3433
Link Speed (mph)	30		30			30
Link Distance (ft)	547		441			294
Travel Time (s)	12.4		10.0			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	239	189	511	306
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	428	0	0	817
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	215	170	460	275
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	239	189	511	306
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			441			636
pX, platoon unblocked	0.86					
vC, conflicting volume	1508	214			428	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1261	214			428	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			55	
cM capacity (veh/h)	76	791			1128	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	159	269	613	204
Volume Left	0	0	511	0
Volume Right	0	189	0	0
cSH	1700	1700	1128	1700
Volume to Capacity	0.09	0.16	0.45	0.12
Queue Length 95th (ft)	0	0	60	0
Control Delay (s)	0.0	0.0	9.9	0.0
Lane LOS			A	
Approach Delay (s)	0.0		7.4	
Approach LOS				

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	145	25	15	195	50	30	380	25	60	295	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.983			0.974			0.991			0.988	
Flt Protected		0.993			0.997			0.997			0.992	
Satd. Flow (prot)	0	1818	0	0	1809	0	0	5024	0	0	3469	0
Flt Permitted		0.894			0.981			0.896			0.860	
Satd. Flow (perm)	0	1637	0	0	1780	0	0	4515	0	0	3007	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			16			12			17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		111			158			910			482	
Travel Time (s)		2.5			3.6			20.7			11.0	
Peak Hour Factor	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)	33	161	28	17	217	56	33	422	28	67	328	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	290	0	0	483	0	0	428	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	1 6	
Permitted Phases	4			8			2			1 6		
Detector Phase	4	4		8	8		2	2		1	1 6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		10.0		
Total Split (s)	33.0	33.0	0.0	33.0	33.0	0.0	29.0	29.0	0.0	22.0	73.0	0.0
Total Split (%)	39.3%	39.3%	0.0%	39.3%	39.3%	0.0%	34.5%	34.5%	0.0%	26.2%	86.9%	0.0%
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		16.0		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		5.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5		

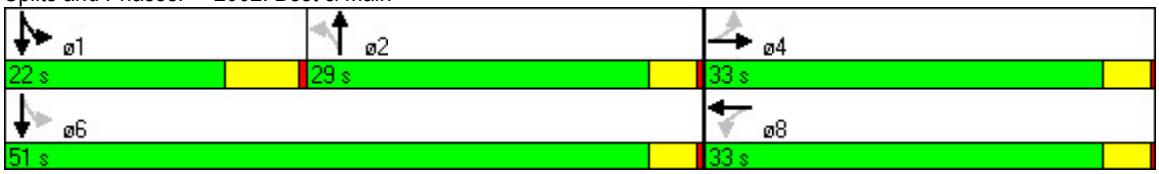
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	51.0
Total Split (%)	61%
Maximum Green (s)	47.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-3.0	-3.0	-1.0
Total Lost Time (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
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		
Recall Mode	Min	Min		Min	Min		Max	Max		Max		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0	0		0	0				
Act Effct Green (s)		17.2			17.2			26.1			48.2	
Actuated g/C Ratio		0.24			0.24			0.37			0.68	
v/c Ratio		0.55			0.66			0.29			0.20	
Control Delay		27.9			30.5			17.0			5.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.9			30.5			17.0			5.0	
LOS		C			C			B			A	
Approach Delay		27.9			30.5			17.0			5.0	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 84
Actuated Cycle Length: 71.4
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 17.8 — Intersection LOS: B
Intersection Capacity Utilization 48.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2002: Best & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	222	290	483	428
v/c Ratio	0.55	0.66	0.29	0.20
Control Delay	27.9	30.5	17.0	5.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.9	30.5	17.0	5.0
Queue Length 50th (ft)	81	109	52	29
Queue Length 95th (ft)	143	182	88	61
Internal Link Dist (ft)	31	78	830	402
Turn Bay Length (ft)				
Base Capacity (vph)	696	760	1659	2159
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.38	0.29	0.20

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	95	45	25	125	45	125	380	20	25	355	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.971			0.969			0.994			0.978	
Flt Protected		0.984			0.994			0.988			0.997	
Satd. Flow (prot)	0	1780	0	0	1794	0	0	4994	0	0	3451	0
Flt Permitted		0.789			0.951			0.773			0.909	
Satd. Flow (perm)	0	1427	0	0	1717	0	0	3907	0	0	3146	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			22			13			30	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		250			335			338			910	
Travel Time (s)		5.7			7.6			7.7			20.7	
Peak Hour Factor	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)	78	106	50	28	139	50	139	422	22	28	394	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	234	0	0	217	0	0	583	0	0	494	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	14.0	60.0	0.0	32.0	32.0	0.0
Total Split (%)	38.7%	38.7%	0.0%	38.7%	38.7%	0.0%	18.7%	80.0%	0.0%	42.7%	42.7%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0			28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

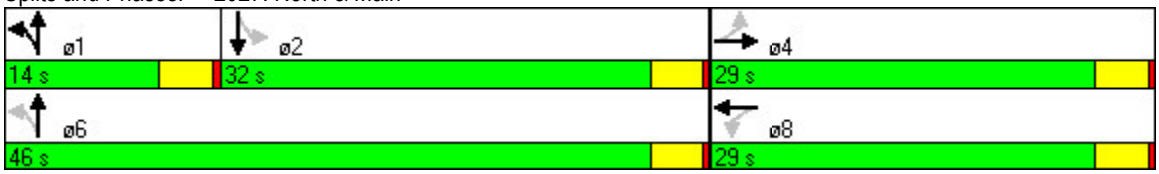
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	46.0
Total Split (%)	61%
Maximum Green (s)	42.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		None			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		15.0			15.0			41.7			29.2	
Actuated g/C Ratio		0.24			0.24			0.67			0.47	
v/c Ratio		0.66			0.51			0.21			0.33	
Control Delay		29.0			22.8			4.7			11.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		29.0			22.8			4.7			11.8	
LOS		C			C			A			B	
Approach Delay		29.0			22.8			4.7			11.8	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 62.7
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 13.2 — Intersection LOS: B
Intersection Capacity Utilization 57.1% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2027: North & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	234	217	583	494
v/c Ratio	0.66	0.51	0.21	0.33
Control Delay	29.0	22.8	4.7	11.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	29.0	22.8	4.7	11.8
Queue Length 50th (ft)	72	63	24	53
Queue Length 95th (ft)	141	122	50	108
Internal Link Dist (ft)	170	255	258	830
Turn Bay Length (ft)				
Base Capacity (vph)	608	731	2898	1483
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.30	0.20	0.33

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	45	55	550	15	20	605
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.926		0.996			
Flt Protected	0.978					0.998
Satd. Flow (prot)	1687	0	5016	0	0	3498
Flt Permitted	0.978					0.928
Satd. Flow (perm)	1687	0	5016	0	0	3253
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	61		10			
Link Speed (mph)	30		30			30
Link Distance (ft)	394		482			736
Travel Time (s)	9.0		11.0			16.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Adj. Flow (vph)	50	61	611	17	22	672
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	0	628	0	0	694
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Maximum Green (s)	21.0		51.0		51.0	51.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	8.1		62.1			62.1
Actuated g/C Ratio	0.11		0.82			0.82
v/c Ratio	0.47		0.15			0.26
Control Delay	22.6		2.0			2.5
Queue Delay	0.0		0.0			0.0
Total Delay	22.6		2.0			2.5
LOS	C		A			A
Approach Delay	22.6		2.0			2.5
Approach LOS	C		A			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.3
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 3.8 — Intersection LOS: A
Intersection Capacity Utilization 43.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2101: Dodge & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	111	628	694
v/c Ratio	0.47	0.15	0.26
Control Delay	22.6	2.0	2.5
Queue Delay	0.0	0.0	0.0
Total Delay	22.6	2.0	2.5
Queue Length 50th (ft)	23	17	31
Queue Length 95th (ft)	63	33	61
Internal Link Dist (ft)	314	402	656
Turn Bay Length (ft)			
Base Capacity (vph)	515	4139	2683
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.22	0.15	0.26

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	30	20	5	40	5	190	390	20	10	310	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.951			0.986			0.996			0.990	
Flt Protected		0.995			0.995			0.984			0.999	
Satd. Flow (prot)	0	1763	0	0	1827	0	0	1826	0	0	1842	0
Flt Permitted		0.961			0.961			0.777			0.981	
Satd. Flow (perm)	0	1702	0	0	1765	0	0	1442	0	0	1809	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			6			5			7	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			388			675			662	
Travel Time (s)		8.6			8.8			15.3			15.0	
Peak Hour Factor	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)	6	33	22	6	44	6	211	433	22	11	344	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	61	0	0	56	0	0	666	0	0	383	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	14.0	51.0	0.0	23.0	23.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%	23.3%	85.0%	0.0%	38.3%	38.3%	0.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		10.0			19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	37.0
Total Split (%)	62%
Maximum Green (s)	33.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		Max			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		7.8			7.8			34.6			20.4	
Actuated g/C Ratio		0.18			0.18			0.79			0.46	
v/c Ratio		0.19			0.18			0.54			0.46	
Control Delay		13.9			16.9			4.8			11.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.9			16.9			4.8			11.7	
LOS		B			B			A			B	
Approach Delay		13.9			16.9			4.8			11.7	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 44
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 8.1 — Intersection LOS: A
Intersection Capacity Utilization 64.6% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Carlton & Michigan

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	61	56	666	383
v/c Ratio	0.19	0.18	0.54	0.46
Control Delay	13.9	16.9	4.8	11.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.9	16.9	4.8	11.7
Queue Length 50th (ft)	9	12	56	72
Queue Length 95th (ft)	34	36	126	142
Internal Link Dist (ft)	297	308	595	582
Turn Bay Length (ft)				
Base Capacity (vph)	800	821	1234	841
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.08	0.07	0.54	0.46

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	110	30	15	65	20	55	730	40	5	255	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.973			0.994			0.992	
Flt Protected		0.998			0.992			0.997			0.999	
Satd. Flow (prot)	0	1807	0	0	1798	0	0	1846	0	0	1846	0
Flt Permitted		0.998			0.992			0.997			0.999	
Satd. Flow (perm)	0	1807	0	0	1798	0	0	1846	0	0	1846	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			293	
Travel Time (s)		7.4			17.0			9.7			6.7	
Peak Hour Factor	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)	6	122	33	17	72	22	61	811	44	6	283	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	0	111	0	0	916	0	0	306	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 80.0%	ICU Level of Service D
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	110	30	15	65	20	55	730	40	5	255	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	122	33	17	72	22	61	811	44	6	283	17

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	161	111	917	306
Volume Left (vph)	6	17	61	6
Volume Right (vph)	33	22	44	17
Hadj (s)	-0.08	-0.06	0.02	0.00
Departure Headway (s)	6.7	6.9	5.4	5.9
Degree Utilization, x	0.30	0.21	1.38	0.50
Capacity (veh/h)	508	485	667	594
Control Delay (s)	12.5	11.7	197.5	14.6
Approach Delay (s)	12.5	11.7	197.5	14.6
Approach LOS	B	B	F	B

Intersection Summary			
Delay	126.4		
HCM Level of Service	F		
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	130	35	40	80	15	10	80	25	10	60	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.972			0.985			0.970			0.989	
Flt Protected		0.998			0.986			0.996			0.993	
Satd. Flow (prot)	0	1807	0	0	1809	0	0	1800	0	0	3476	0
Flt Permitted		0.998			0.986			0.996			0.993	
Satd. Flow (perm)	0	1807	0	0	1809	0	0	1800	0	0	3476	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		287			325			1308			290	
Travel Time (s)		6.5			7.4			29.7			6.6	
Peak Hour Factor	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)	6	144	39	44	89	17	11	89	28	11	67	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	150	0	0	128	0	0	84	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 39.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	130	35	40	80	15	10	80	25	10	60	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	144	39	44	89	17	11	89	28	11	67	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	189	150	128	44	39
Volume Left (vph)	6	44	11	11	0
Volume Right (vph)	39	17	28	0	6
Hadj (s)	-0.08	0.03	-0.08	0.16	-0.07
Departure Headway (s)	4.5	4.7	4.9	5.6	5.4
Degree Utilization, x	0.24	0.20	0.17	0.07	0.06
Capacity (veh/h)	745	721	690	594	619
Control Delay (s)	9.0	8.8	8.9	7.8	7.5
Approach Delay (s)	9.0	8.8	8.9	7.7	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	8.7		
HCM Level of Service	A		
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	50	265	20	125	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.887		0.990			
Flt Protected	0.992					0.988
Satd. Flow (prot)	1639	0	3504	0	0	5024
Flt Permitted	0.992					0.988
Satd. Flow (perm)	1639	0	3504	0	0	5024
Link Speed (mph)	30		30			30
Link Distance (ft)	287		532			287
Travel Time (s)	6.5		12.1			6.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	56	294	22	139	456
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	0	316	0	0	595
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 32.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	50	265	20	125	410
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	56	294	22	139	456
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			532			287
pX, platoon unblocked	0.96					
vC, conflicting volume	735	158			317	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	584	158			317	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	94			89	
cM capacity (veh/h)	378	859			1240	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	67	196	120	230	182	182
Volume Left	11	0	0	139	0	0
Volume Right	56	0	22	0	0	0
cSH	709	1700	1700	1240	1700	1700
Volume to Capacity	0.09	0.12	0.07	0.11	0.11	0.11
Queue Length 95th (ft)	8	0	0	9	0	0
Control Delay (s)	10.6	0.0	0.0	5.4	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	10.6	0.0		2.1		
Approach LOS	B					

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	35	30	5	30	15	190	240	15	10	260	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.946			0.959			0.995			0.961	
Flt Protected		0.993			0.995			0.979			0.999	
Satd. Flow (prot)	0	1750	0	0	1777	0	0	1815	0	0	3398	0
Flt Permitted		0.973			0.979			0.694			0.944	
Satd. Flow (perm)	0	1715	0	0	1749	0	0	1286	0	0	3211	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			17			6			106	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1103			233			662			363	
Travel Time (s)		25.1			5.3			15.0			8.3	
Peak Hour Factor	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)	11	39	33	6	33	17	211	267	17	11	289	106
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	83	0	0	56	0	0	495	0	0	406	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.16			0.11			0.62			0.20	
Control Delay		12.0			12.9			11.4			3.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.0			12.9			11.4			3.9	
LOS		B			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		12.0			12.9			11.4			3.9	
Approach LOS		B			B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 55	
Control Type: Pretimed	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 50.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: High & Michigan

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	83	56	495	406
v/c Ratio	0.16	0.11	0.62	0.20
Control Delay	12.0	12.9	11.4	3.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.0	12.9	11.4	3.9
Queue Length 50th (ft)	13	10	94	20
Queue Length 95th (ft)	41	33	180	36
Internal Link Dist (ft)	1023	153	582	283
Turn Bay Length (ft)				
Base Capacity (vph)	510	508	795	2021
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.11	0.62	0.20

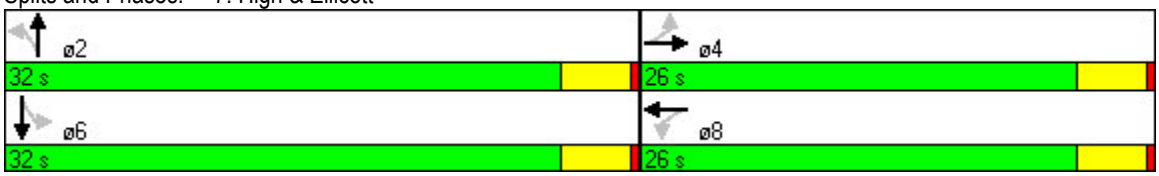
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	115	10	20	230	25	60	655	115	0	240	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.988			0.981				
Flt Protected		0.995			0.996			0.996				
Satd. Flow (prot)	0	1835	0	0	1833	0	0	1820	0	0	1863	0
Flt Permitted		0.958			0.978			0.960				
Satd. Flow (perm)	0	1767	0	0	1800	0	0	1754	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			10			20				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			1103			365			184	
Travel Time (s)		3.8			25.1			8.3			4.2	
Peak Hour Factor	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)	17	128	11	22	256	28	67	728	128	0	267	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	0	0	306	0	0	923	0	0	267	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	32.0	32.0	0.0	32.0	32.0	0.0
Total Split (%)	44.8%	44.8%	0.0%	44.8%	44.8%	0.0%	55.2%	55.2%	0.0%	55.2%	55.2%	0.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		23.0			23.0			29.0			29.0	
Actuated g/C Ratio		0.40			0.40			0.50			0.50	
v/c Ratio		0.22			0.42			1.04			0.29	
Control Delay		12.0			14.5			59.4			9.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.0			14.5			59.4			9.5	
LOS		B			B			E			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		12.0			14.5			59.4			9.5	
Approach LOS		B			B			E			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 38.5	Intersection LOS: D
Intersection Capacity Utilization 85.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: High & Ellicott



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	156	306	923	267
v/c Ratio	0.22	0.42	1.04	0.29
Control Delay	12.0	14.5	59.4	9.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.0	14.5	59.4	9.5
Queue Length 50th (ft)	33	71	~357	50
Queue Length 95th (ft)	67	128	#561	90
Internal Link Dist (ft)	89	1023	285	104
Turn Bay Length (ft)				
Base Capacity (vph)	706	720	887	932
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.43	1.04	0.29

Intersection Summary

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

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lane Configurations							
Volume (vph)	50	75	310	80	140	355	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91	
Frt	0.919		0.969				
Flt Protected	0.980					0.986	
Satd. Flow (prot)	1678	0	3430	0	0	5014	
Flt Permitted	0.980					0.768	
Satd. Flow (perm)	1678	0	3430	0	0	3906	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	83		52				
Link Speed (mph)	30		30			30	
Link Distance (ft)	293		353			353	
Travel Time (s)	6.7		8.0			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	56	83	344	89	156	394	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	139	0	433	0	0	550	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		1		1	1	
Detector Template							
Leading Detector (ft)	50		50		50	50	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	50		50		50	50	
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Turn Type					custom		
Protected Phases	8		2		1	1 6	6
Permitted Phases					6		
Detector Phase	8		2		1	1 6	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0		4.0
Minimum Split (s)	20.0		20.0		8.0		20.0
Total Split (s)	27.0	0.0	36.0	0.0	14.0	64.0	50.0
Total Split (%)	35.1%	0.0%	46.8%	0.0%	18.2%	83.1%	65%
Maximum Green (s)	23.0		32.0		10.0		46.0
Yellow Time (s)	3.5		3.5		3.5		3.5
All-Red Time (s)	0.5		0.5		0.5		0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lead/Lag			Lag		Lead		
Lead-Lag Optimize?			Yes		Yes		
Vehicle Extension (s)	3.0		3.0		3.0		3.0
Recall Mode	Min		Max		None		Max
Walk Time (s)	5.0		5.0				5.0
Flash Dont Walk (s)	11.0		11.0				11.0
Pedestrian Calls (#/hr)	0		0				0
Act Effct Green (s)	8.9		35.3			47.1	
Actuated g/C Ratio	0.14		0.57			0.76	
v/c Ratio	0.45		0.22			0.18	
Control Delay	16.2		6.7			2.4	
Queue Delay	0.0		0.0			0.0	
Total Delay	16.2		6.7			2.4	
LOS	B		A			A	
Approach Delay	16.2		6.7			2.4	
Approach LOS	B		A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 77	
Actuated Cycle Length: 62	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 38.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: High & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	139	433	550
v/c Ratio	0.45	0.22	0.18
Control Delay	16.2	6.7	2.4
Queue Delay	0.0	0.0	0.0
Total Delay	16.2	6.7	2.4
Queue Length 50th (ft)	19	31	13
Queue Length 95th (ft)	63	65	28
Internal Link Dist (ft)	213	273	273
Turn Bay Length (ft)			
Base Capacity (vph)	702	1976	3164
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.20	0.22	0.17

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	15	25	0	0	0	210	640	10	5	260	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.926						0.998			0.993	
Flt Protected		0.994						0.988			0.999	
Satd. Flow (prot)	0	1715	0	0	0	0	0	1837	0	0	1848	0
Flt Permitted		0.994						0.838			0.987	
Satd. Flow (perm)	0	1715	0	0	0	0	0	1558	0	0	1826	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28						2			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			376			922			675	
Travel Time (s)		8.3			8.5			21.0			15.3	
Peak Hour Factor	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)	6	17	28	0	0	0	233	711	11	6	289	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	0	0	0	955	0	0	312	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm			Perm		
Protected Phases		4						2			6	
Permitted Phases	4						2			6		
Minimum Split (s)	20.0	20.0					20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0					36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5					3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5					0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0					5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.0						37.0			37.0	
Actuated g/C Ratio		0.28						0.62			0.62	
v/c Ratio		0.10						0.99			0.28	
Control Delay		10.3						42.1			5.9	
Queue Delay		0.0						0.0			0.0	
Total Delay		10.3						42.1			5.9	
LOS		B						D			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.3						42.1			5.9	
Approach LOS		B						D			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 32.3	Intersection LOS: C
Intersection Capacity Utilization 74.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Virginia & Michigan

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	51	955	312
v/c Ratio	0.10	0.99	0.28
Control Delay	10.3	42.1	5.9
Queue Delay	0.0	0.0	0.0
Total Delay	10.3	42.1	5.9
Queue Length 50th (ft)	6	291	43
Queue Length 95th (ft)	27	#577	76
Internal Link Dist (ft)	283	842	595
Turn Bay Length (ft)			
Base Capacity (vph)	506	962	1129
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.10	0.99	0.28

Intersection Summary

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	20	40	820	60	5	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910		0.991			
Flt Protected	0.984					0.999
Satd. Flow (prot)	1668	0	1846	0	0	1861
Flt Permitted	0.984					0.999
Satd. Flow (perm)	1668	0	1846	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	735		148			425
Travel Time (s)	16.7		3.4			9.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	44	911	67	6	328
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	978	0	0	334
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 57.0%	ICU Level of Service B
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	20	40	820	60	5	295
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	44	911	67	6	328
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			939			
pX, platoon unblocked						
vC, conflicting volume	1283	944			978	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1283	944			978	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	88	86			99	
cM capacity (veh/h)	181	318			706	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	67	978	333
Volume Left	22	0	6
Volume Right	44	67	0
cSH	254	1700	706
Volume to Capacity	0.26	0.58	0.01
Queue Length 95th (ft)	26	0	1
Control Delay (s)	24.2	0.0	0.3
Lane LOS	C		A
Approach Delay (s)	24.2	0.0	0.3
Approach LOS	C		

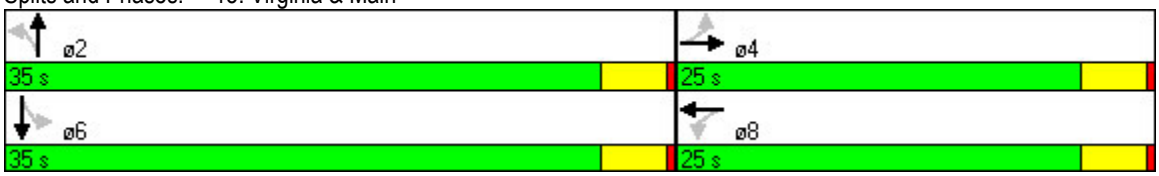
Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	35	15	5	10	5	10	210	5	10	245	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.973			0.965			0.996			0.977	
Flt Protected		0.984			0.987			0.998			0.998	
Satd. Flow (prot)	0	1783	0	0	1774	0	0	3518	0	0	4958	0
Flt Permitted		0.880			0.939			0.942			0.932	
Satd. Flow (perm)	0	1595	0	0	1688	0	0	3321	0	0	4630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			6			6			50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		513			160			728			532	
Travel Time (s)		11.7			3.6			16.5			12.1	
Peak Hour Factor	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)	28	39	17	6	11	6	11	233	6	11	272	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	23	0	0	250	0	0	333	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.6			7.4			42.4			42.4	
Actuated g/C Ratio		0.15			0.14			0.81			0.81	
v/c Ratio		0.34			0.09			0.09			0.09	
Control Delay		20.1			16.2			2.5			2.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.1			16.2			2.5			2.1	
LOS		C			B			A			A	
Approach Delay		20.1			16.2			2.5			2.1	
Approach LOS		C			B			A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 52.2	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 26.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Virginia & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	84	23	250	333
v/c Ratio	0.34	0.09	0.09	0.09
Control Delay	20.1	16.2	2.5	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.1	16.2	2.5	2.1
Queue Length 50th (ft)	22	6	9	7
Queue Length 95th (ft)	45	18	21	16
Internal Link Dist (ft)	433	80	648	452
Turn Bay Length (ft)				
Base Capacity (vph)	655	686	2697	3768
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.13	0.03	0.09	0.09

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	125	30	15	60	5	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.974				0.889	
Flt Protected				0.990	0.991	
Satd. Flow (prot)	1814	0	0	1844	1641	0
Flt Permitted				0.990	0.991	
Satd. Flow (perm)	1814	0	0	1844	1641	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	747			377	583	
Travel Time (s)	17.0			8.6	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	139	33	17	67	6	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	0	0	84	34	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	125	30	15	60	5	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	139	33	17	67	6	28

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	172	83	33
Volume Left (vph)	0	17	6
Volume Right (vph)	33	0	28
Hadj (s)	-0.08	0.07	-0.43
Departure Headway (s)	4.0	4.2	4.0
Degree Utilization, x	0.19	0.10	0.04
Capacity (veh/h)	891	840	838
Control Delay (s)	7.9	7.7	7.2
Approach Delay (s)	7.9	7.7	7.2
Approach LOS	A	A	A

Intersection Summary			
Delay	7.7		
HCM Level of Service	A		
Intersection Capacity Utilization	25.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	25	40	35	235	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.883		0.966	
Flt Protected		0.981			0.964	
Satd. Flow (prot)	0	1827	1645	0	1735	0
Flt Permitted		0.981			0.964	
Satd. Flow (perm)	0	1827	1645	0	1735	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		735	363		583	
Travel Time (s)		16.7	8.3		13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	44	39	261	33	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	72	300	0	44	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 33.2%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	25	40	35	235	30	10
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)	28	44	39	261	33	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)			363			
pX, platoon unblocked						
vC, conflicting volume	300				269	169
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	300				269	169
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				95	99
cM capacity (veh/h)	1261				704	874

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	72	300	44
Volume Left	28	0	33
Volume Right	0	261	11
cSH	1261	1700	740
Volume to Capacity	0.02	0.18	0.06
Queue Length 95th (ft)	2	0	5
Control Delay (s)	3.2	0.0	10.2
Lane LOS	A		B
Approach Delay (s)	3.2	0.0	10.2
Approach LOS			B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	760	55	90	230	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.991				0.865	
Flt Protected				0.986		
Satd. Flow (prot)	1846	0	0	1837	1611	0
Flt Permitted				0.986		
Satd. Flow (perm)	1846	0	0	1837	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	791			148	443	
Travel Time (s)	18.0			3.4	10.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	844	61	100	256	0	172
Shared Lane Traffic (%)						
Lane Group Flow (vph)	905	0	0	356	172	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 80.0%	ICU Level of Service D
Analysis Period (min) 15	

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	760	55	90	230	0	155
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)	844	61	100	256	0	172
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	791					
pX, platoon unblocked						
vC, conflicting volume			906		1331	875
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			906		1331	875
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			87		100	51
cM capacity (veh/h)			751		148	349

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	906	356	172
Volume Left	0	100	0
Volume Right	61	0	172
cSH	1700	751	349
Volume to Capacity	0.53	0.13	0.49
Queue Length 95th (ft)	0	11	65
Control Delay (s)	0.0	4.1	25.0
Lane LOS		A	D
Approach Delay (s)	0.0	4.1	25.0
Approach LOS			D

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	100	45	65	185	15	50	60	30	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962			0.992			0.971				
Flt Protected		0.995			0.988			0.982				
Satd. Flow (prot)	0	1783	0	0	1826	0	0	1776	0	0	0	0
Flt Permitted		0.995			0.988			0.982				
Satd. Flow (perm)	0	1783	0	0	1826	0	0	1776	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			1080			316			653	
Travel Time (s)		6.8			24.5			7.2			14.8	
Peak Hour Factor	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)	17	111	50	72	206	17	56	67	33	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	295	0	0	156	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 40.8%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	100	45	65	185	15	50	60	30	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	111	50	72	206	17	56	67	33	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	178	294	156
Volume Left (vph)	17	72	56
Volume Right (vph)	50	17	33
Hadj (s)	-0.12	0.05	-0.02
Departure Headway (s)	4.5	4.6	5.0
Degree Utilization, x	0.22	0.37	0.21
Capacity (veh/h)	757	756	670
Control Delay (s)	8.9	10.3	9.3
Approach Delay (s)	8.9	10.3	9.3
Approach LOS	A	B	A

Intersection Summary			
Delay	9.6		
HCM Level of Service	A		
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	65	25	75	195	35	45	95	30	30	235	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.966			0.984				0.850		0.982	
Flt Protected		0.995			0.988			0.984			0.995	
Satd. Flow (prot)	0	1790	0	0	1811	0	0	1833	1583	0	1820	0
Flt Permitted		0.955			0.909			0.849			0.968	
Satd. Flow (perm)	0	1718	0	0	1666	0	0	1581	1583	0	1771	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			9				33		23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			414			330			643	
Travel Time (s)		24.5			9.4			7.5			14.6	
Peak Hour Factor	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)	11	72	28	83	217	39	50	106	33	33	261	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	339	0	0	156	33	0	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	51.0	51.0	51.0	51.0	51.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	28.2%	28.2%	0.0%	71.8%	71.8%	71.8%	71.8%	71.8%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		16.5			16.5			48.7	48.7		48.7	
Actuated g/C Ratio		0.23			0.23			0.68	0.68		0.68	
v/c Ratio		0.27			0.86			0.14	0.03		0.28	
Control Delay		19.8			48.5			4.5	1.6		4.9	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		19.8			48.5			4.5	1.6		4.9	
LOS		B			D			A	A		A	
Approach Delay		19.8			48.5			4.0			4.9	
Approach LOS		B			D			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 71
Actuated Cycle Length: 71.2
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 21.5 — Intersection LOS: C
Intersection Capacity Utilization 53.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 21: North & Michigan

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	111	339	156	33	338
v/c Ratio	0.27	0.86	0.14	0.03	0.28
Control Delay	19.8	48.5	4.5	1.6	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	48.5	4.5	1.6	4.9
Queue Length 50th (ft)	31	138	21	0	45
Queue Length 95th (ft)	71	#276	39	7	77
Internal Link Dist (ft)	1000	334	250		563
Turn Bay Length (ft)					
Base Capacity (vph)	427	405	1081	1092	1218
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.84	0.14	0.03	0.28

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	10	5	10	5	20	60	20	5	50	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.955			0.965			0.973			0.987	
Flt Protected		0.984			0.987			0.990			0.996	
Satd. Flow (prot)	0	1750	0	0	1774	0	0	1794	0	0	3479	0
Flt Permitted		0.984			0.987			0.990			0.996	
Satd. Flow (perm)	0	1750	0	0	1774	0	0	1794	0	0	3479	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			326			290			355	
Travel Time (s)		6.5			7.4			6.6			8.1	
Peak Hour Factor	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)	11	11	11	6	11	6	22	67	22	6	56	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	0	0	23	0	0	111	0	0	68	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 22.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	5	10	5	20	60	20	5	50	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	11	11	6	11	6	22	67	22	6	56	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	33	22	111	33	33
Volume Left (vph)	11	6	22	6	0
Volume Right (vph)	11	6	22	0	6
Hadj (s)	-0.10	-0.07	-0.05	0.12	-0.08
Departure Headway (s)	4.2	4.3	4.2	4.8	4.6
Degree Utilization, x	0.04	0.03	0.13	0.04	0.04
Capacity (veh/h)	815	806	845	724	758
Control Delay (s)	7.4	7.4	7.8	6.8	6.6
Approach Delay (s)	7.4	7.4	7.8	6.7	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	7.4		
HCM Level of Service	A		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	35	0	35	180	135	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950			0.992		
Satd. Flow (prot)	1770	0	0	1848	1863	0
Flt Permitted	0.950			0.992		
Satd. Flow (perm)	1770	0	0	1848	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			181	316	
Travel Time (s)	14.9			4.1	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	0	39	200	150	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	239	150	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 31.8%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	0	35	180	135	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	0	39	200	150	0

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	39	239	150
Volume Left (vph)	39	39	0
Volume Right (vph)	0	0	0
Hadj (s)	0.23	0.07	0.03
Departure Headway (s)	5.0	4.2	4.3
Degree Utilization, x	0.05	0.28	0.18
Capacity (veh/h)	662	834	825
Control Delay (s)	8.3	8.9	8.2
Approach Delay (s)	8.3	8.9	8.2
Approach LOS	A	A	A

Intersection Summary			
Delay	8.6		
HCM Level of Service	A		
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	5	10	0	15	25	320	15	5	260	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.932			0.918			0.994			0.987	
Flt Protected		0.976			0.981			0.997			0.999	
Satd. Flow (prot)	0	1694	0	0	1678	0	0	3507	0	0	5014	0
Flt Permitted		0.976			0.981			0.997			0.999	
Satd. Flow (perm)	0	1694	0	0	1678	0	0	3507	0	0	5014	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		304			655			353			338	
Travel Time (s)		6.9			14.9			8.0			7.7	
Peak Hour Factor	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)	6	0	6	11	0	17	28	356	17	6	289	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	28	0	0	401	0	0	323	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.1%	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)	5	0	5	10	0	15	25	320	15	5	260	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	0	6	11	0	17	28	356	17	6	289	28
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								353			338	
pX, platoon unblocked												
vC, conflicting volume	564	742	110	532	747	186	317			372		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	564	742	110	532	747	186	317			372		
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	100	99	97	100	98	98			100		
cM capacity (veh/h)	392	333	922	419	331	824	1240			1183		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	11	28	206	194	78	144	100
Volume Left	6	11	28	0	6	0	0
Volume Right	6	17	0	17	0	0	28
cSH	550	594	1240	1700	1183	1700	1700
Volume to Capacity	0.02	0.05	0.02	0.11	0.00	0.08	0.06
Queue Length 95th (ft)	2	4	2	0	0	0	0
Control Delay (s)	11.7	11.4	1.2	0.0	0.6	0.0	0.0
Lane LOS	B	B	A		A		
Approach Delay (s)	11.7	11.4	0.6		0.1		
Approach LOS	B	B					

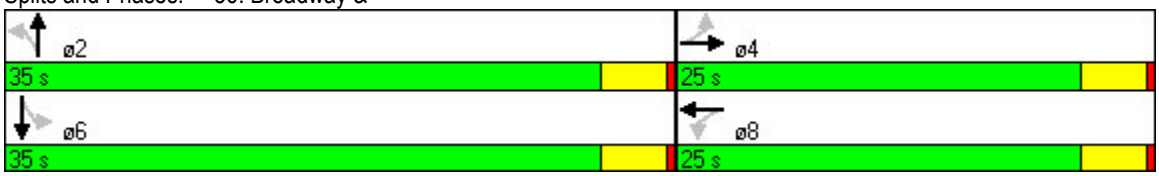
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	130	10	30	250	50	35	555	30	20	235	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.991			0.977			0.993			0.984	
Flt Protected		0.992			0.996			0.997			0.997	
Satd. Flow (prot)	0	3286	0	0	3346	0	0	3437	0	0	3405	0
Flt Permitted		0.880			0.920			0.923			0.902	
Satd. Flow (perm)	0	2915	0	0	3090	0	0	3181	0	0	3081	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			38			12			31	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		282			892			685			803	
Travel Time (s)		6.4			20.3			15.6			18.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	8%	5%	5%	5%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	28	144	11	33	278	56	39	617	33	22	261	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	367	0	0	689	0	0	316	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.18			0.33			0.42			0.20	
Control Delay		13.3			13.8			9.7			5.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.3			13.8			9.7			5.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		13.3			13.8			9.7			5.9	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 52.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 36: Broadway &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	183	367	689	316
v/c Ratio	0.18	0.33	0.42	0.20
Control Delay	13.3	13.8	9.7	5.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.3	13.8	9.7	5.9
Queue Length 50th (ft)	22	44	72	21
Queue Length 95th (ft)	41	74	107	21
Internal Link Dist (ft)	202	812	605	723
Turn Bay Length (ft)				
Base Capacity (vph)	1027	1106	1649	1607
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.33	0.42	0.20

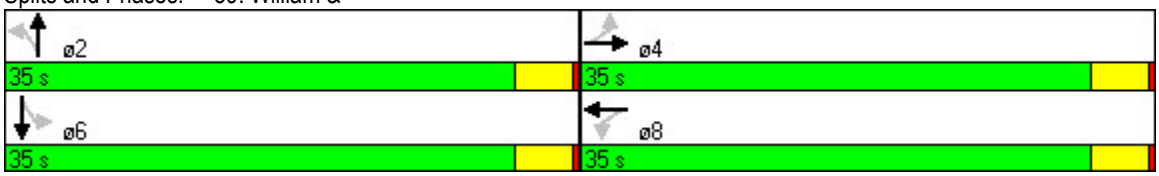
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	85	10	65	225	70	45	565	0	35	205	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.986			0.971						0.989	
Flt Protected		0.993			0.991			0.996			0.993	
Satd. Flow (prot)	0	3100	0	0	3406	0	0	3491	0	0	3376	0
Flt Permitted		0.898			0.881			0.910			0.835	
Satd. Flow (perm)	0	2804	0	0	3028	0	0	3189	0	0	2839	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			54						16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			673			273			685	
Travel Time (s)		6.7			15.3			6.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	14%	14%	2%	2%	2%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	17	94	11	72	250	78	50	628	0	39	228	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	400	0	0	678	0	0	289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		31.0			31.0			31.0			31.0	
Actuated g/C Ratio		0.44			0.44			0.44			0.44	
v/c Ratio		0.10			0.29			0.48			0.23	
Control Delay		10.6			11.4			15.2			12.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.6			11.4			15.2			12.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			B			B	
Approach Delay		10.6			11.4			15.2			12.0	
Approach LOS		B			B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 48.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 39: William &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	122	400	678	289
v/c Ratio	0.10	0.29	0.48	0.23
Control Delay	10.6	11.4	15.2	12.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	11.4	15.2	12.0
Queue Length 50th (ft)	13	47	104	36
Queue Length 95th (ft)	28	75	148	60
Internal Link Dist (ft)	213	593	193	605
Turn Bay Length (ft)				
Base Capacity (vph)	1248	1371	1412	1266
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.10	0.29	0.48	0.23

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	0	3539	0	0	3539
Link Speed (mph)	30		30			30
Link Distance (ft)	329		351			273
Travel Time (s)	7.5		8.0			6.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	0	0	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)						273
pX, platoon unblocked						
vC, conflicting volume	0	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1023	1084			1622	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	0	0	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS				
Approach Delay (s)	0.0		0.0	
Approach LOS				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	5	65	20	30	30	5	310	15	15	770	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.891			0.949			0.993			0.992	
Flt Protected		0.994			0.988			0.999			0.999	
Satd. Flow (prot)	0	1650	0	0	1713	0	0	3347	0	0	5040	0
Flt Permitted		0.967			0.902			0.944			0.932	
Satd. Flow (perm)	0	1605	0	0	1564	0	0	3163	0	0	4702	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			33			12			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		433			549			728			701	
Travel Time (s)		9.8			12.5			16.5			15.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	11	6	72	22	33	33	6	344	17	17	856	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	88	0	0	367	0	0	923	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.1			8.1			58.1			58.1	
Actuated g/C Ratio		0.11			0.11			0.81			0.81	
v/c Ratio		0.36			0.43			0.14			0.24	
Control Delay		14.5			25.8			2.2			2.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.5			25.8			2.2			2.3	
LOS		B			C			A			A	
Approach Delay		14.5			25.8			2.2			2.3	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 71.4
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 4.5 — Intersection LOS: A
Intersection Capacity Utilization 41.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 46: Delta Sonic & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	89	88	367	923
v/c Ratio	0.36	0.43	0.14	0.24
Control Delay	14.5	25.8	2.2	2.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.5	25.8	2.2	2.3
Queue Length 50th (ft)	7	23	14	27
Queue Length 95th (ft)	43	59	30	50
Internal Link Dist (ft)	353	469	648	621
Turn Bay Length (ft)				
Base Capacity (vph)	524	484	2574	3828
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.18	0.14	0.24

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	5	15	5	20	5	370	15	10	835	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.955			0.934			0.994			0.999	
Flt Protected		0.984			0.981			0.999			0.999	
Satd. Flow (prot)	0	1750	0	0	1658	0	0	3350	0	0	5075	0
Flt Permitted		0.919			0.868			0.945			0.935	
Satd. Flow (perm)	0	1635	0	0	1467	0	0	3169	0	0	4750	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			22			10			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			670			701			646	
Travel Time (s)		10.7			15.2			15.9			14.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	6	6	6	17	6	22	6	411	17	11	928	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	45	0	0	434	0	0	945	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.9			6.9			66.0			66.0	
Actuated g/C Ratio		0.09			0.09			0.88			0.88	
v/c Ratio		0.12			0.29			0.16			0.23	
Control Delay		27.0			25.1			1.5			1.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.0			25.1			1.5			1.6	
LOS		C			C			A			A	
Approach Delay		27.0			25.1			1.5			1.6	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.1
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.29
Intersection Signal Delay: 2.6 — Intersection LOS: A
Intersection Capacity Utilization 33.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 48: Enterprise & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	18	45	434	945
v/c Ratio	0.12	0.29	0.16	0.23
Control Delay	27.0	25.1	1.5	1.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.0	25.1	1.5	1.6
Queue Length 50th (ft)	6	11	15	25
Queue Length 95th (ft)	23	38	30	43
Internal Link Dist (ft)	389	590	621	566
Turn Bay Length (ft)				
Base Capacity (vph)	463	428	2784	4172
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.11	0.16	0.23

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	45	45	30	95	25	45	315	40	30	745	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.951			0.977			0.985			0.978	
Flt Protected		0.986			0.990			0.994			0.998	
Satd. Flow (prot)	0	1681	0	0	1686	0	0	3273	0	0	4915	0
Flt Permitted		0.847			0.926			0.790			0.916	
Satd. Flow (perm)	0	1444	0	0	1577	0	0	2601	0	0	4511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			12			29			85	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		680			925			646			1583	
Travel Time (s)		15.5			21.0			14.7			36.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	9%	9%	9%	8%	8%	8%	3%	3%	3%
Adj. Flow (vph)	39	50	50	33	106	28	50	350	44	33	828	150
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	167	0	0	444	0	0	1011	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		12.6			12.6			54.1			54.1	
Actuated g/C Ratio		0.17			0.17			0.72			0.72	
v/c Ratio		0.51			0.61			0.23			0.31	
Control Delay		26.9			35.3			4.0			3.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.9			35.3			4.0			3.9	
LOS		C			D			A			A	
Approach Delay		26.9			35.3			4.0			3.9	
Approach LOS		C			D			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 74.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 8.7 — Intersection LOS: A
Intersection Capacity Utilization 50.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 50: Utica & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	139	167	444	1011
v/c Ratio	0.51	0.61	0.23	0.31
Control Delay	26.9	35.3	4.0	3.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.9	35.3	4.0	3.9
Queue Length 50th (ft)	42	63	25	42
Queue Length 95th (ft)	92	120	55	78
Internal Link Dist (ft)	600	845	566	1503
Turn Bay Length (ft)				
Base Capacity (vph)	431	453	1893	3292
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.37	0.23	0.31

Intersection Summary

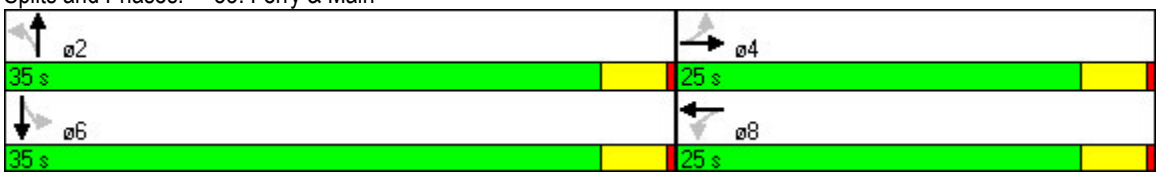
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	145	130	95	165	5	45	275	40	5	690	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.949			0.997			0.984			0.989	
Flt Protected		0.986			0.982			0.994				
Satd. Flow (prot)	0	3217	0	0	3303	0	0	3239	0	0	4981	0
Flt Permitted		0.782			0.675			0.822			0.938	
Satd. Flow (perm)	0	2551	0	0	2271	0	0	2679	0	0	4672	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		144			4			33			31	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1430			1674			1583			565	
Travel Time (s)		32.5			38.0			36.0			12.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	9%	9%	9%	3%	3%	3%
Adj. Flow (vph)	117	161	144	106	183	6	50	306	44	6	767	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	422	0	0	295	0	0	400	0	0	834	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		11.5			11.5			31.1			31.1	
Actuated g/C Ratio		0.23			0.23			0.61			0.61	
v/c Ratio		0.61			0.57			0.24			0.29	
Control Delay		15.2			21.6			5.0			5.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.2			21.6			5.0			5.1	
LOS		B			C			A			A	
Approach Delay		15.2			21.6			5.0			5.1	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 50.6
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 9.8 — Intersection LOS: A
Intersection Capacity Utilization 56.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 53: Ferry & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	422	295	400	834
v/c Ratio	0.61	0.57	0.24	0.29
Control Delay	15.2	21.6	5.0	5.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.2	21.6	5.0	5.1
Queue Length 50th (ft)	37	40	20	32
Queue Length 95th (ft)	72	71	49	66
Internal Link Dist (ft)	1350	1594	1503	485
Turn Bay Length (ft)				
Base Capacity (vph)	1147	949	1660	2885
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.31	0.24	0.29

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	0	80	10	0	15	140	195	20	10	350	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.917			0.918			0.992			0.983	
Flt Protected		0.981			0.981			0.981			0.999	
Satd. Flow (prot)	0	1676	0	0	1678	0	0	1813	0	0	1829	0
Flt Permitted		0.981			0.981			0.981			0.999	
Satd. Flow (perm)	0	1676	0	0	1678	0	0	1813	0	0	1829	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		281			150			363			330	
Travel Time (s)		6.4			3.4			8.3			7.5	
Peak Hour Factor	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	0	89	11	0	17	156	217	22	11	389	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	145	0	0	28	0	0	395	0	0	456	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 61.0%	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 (veh/h)	50	0	80	10	0	15	140	195	20	10	350	50
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	56	0	89	11	0	17	156	217	22	11	389	56
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								363			330	
pX, platoon unblocked	0.98	0.98	0.98	0.98	0.98		0.98					
vC, conflicting volume	994	989	417	1067	1006	228	444			239		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	982	976	389	1056	993	228	418			239		
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 %	71	100	86	93	100	98	86			99		
cM capacity (veh/h)	194	209	643	152	204	812	1113			1328		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	144	28	394	456
Volume Left	56	11	156	11
Volume Right	89	17	22	56
cSH	340	296	1113	1328
Volume to Capacity	0.43	0.09	0.14	0.01
Queue Length 95th (ft)	51	8	12	1
Control Delay (s)	23.2	18.4	4.3	0.3
Lane LOS	C	C	A	A
Approach Delay (s)	23.2	18.4	4.3	0.3
Approach LOS	C	C		

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	10	5	755	270	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955				0.997	
Flt Protected	0.968					
Satd. Flow (prot)	1722	0	0	1863	1857	0
Flt Permitted	0.968					
Satd. Flow (perm)	1722	0	0	1863	1857	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	326			293	365	
Travel Time (s)	7.4			6.7	8.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	11	6	839	300	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	0	0	845	306	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 53.7%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	10	5	755	270	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	11	6	839	300	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					365	
pX, platoon unblocked	0.94	0.94	0.94			
vC, conflicting volume	1153	303	306			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1129	220	223			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	99	100			
cM capacity (veh/h)	210	767	1259			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	33	844	306
Volume Left	22	6	0
Volume Right	11	0	6
cSH	277	1259	1700
Volume to Capacity	0.12	0.00	0.18
Queue Length 95th (ft)	10	0	0
Control Delay (s)	19.8	0.1	0.0
Lane LOS	C	A	
Approach Delay (s)	19.8	0.1	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	128	87	187	103	3	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.952		0.874	
Flt Protected		0.971			0.997	
Satd. Flow (prot)	0	1809	1773	0	1623	0
Flt Permitted		0.971			0.997	
Satd. Flow (perm)	0	1809	1773	0	1623	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		173	169		105	
Travel Time (s)		3.9	3.8		2.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	142	97	208	114	3	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	239	322	0	47	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 41.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	128	87	187	103	3	40
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)	142	97	208	114	3	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)		466	169			
pX, platoon unblocked	0.90				0.90	0.90
vC, conflicting volume	322				646	265
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	186				547	122
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	89				99	95
cM capacity (veh/h)	1245				395	833

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	239	322	48
Volume Left	142	0	3
Volume Right	0	114	44
cSH	1245	1700	773
Volume to Capacity	0.11	0.19	0.06
Queue Length 95th (ft)	10	0	5
Control Delay (s)	5.3	0.0	10.0
Lane LOS	A		A
Approach Delay (s)	5.3	0.0	10.0
Approach LOS			A

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	0	0	0	2210	710	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	6408	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	6408	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	339			382	585	
Travel Time (s)	7.7			8.7	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	2456	789	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	2456	789	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 89.6%		ICU Level of Service E	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	2210	710	0
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)	0	0	0	2456	789	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)	339			382		
pX, platoon unblocked					0.58	
vC, conflicting volume			0		614	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
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		0	100
cM capacity (veh/h)			1622		589	1084

Direction, Lane #	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	614	614	614	614	394	394
Volume Left	0	0	0	0	394	394
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	589	589
Volume to Capacity	0.36	0.36	0.36	0.36	0.67	0.67
Queue Length 95th (ft)	0	0	0	0	126	126
Control Delay (s)	0.0	0.0	0.0	0.0	22.6	22.6
Lane LOS					C	C
Approach Delay (s)	0.0				22.6	
Approach LOS					C	

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	125	2645	175	0	0	0	0	125	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.991						0.982	
Flt Protected					0.998							
Satd. Flow (prot)	0	0	0	0	6337	0	0	0	0	0	1829	0
Flt Permitted					0.998							
Satd. Flow (perm)	0	0	0	0	6337	0	0	0	0	0	1829	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					46						1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	139	2939	194	0	0	0	0	139	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	3272	0	0	0	0	0	161	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.5	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.5	50.5						25.5	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.3	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.5	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					51.5						26.5	
Actuated g/C Ratio					0.61						0.31	
v/c Ratio					0.85						0.28	
Control Delay					16.2						23.6	
Queue Delay					0.0						0.0	
Total Delay					16.2						23.6	
LOS					B						C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					16.2						23.6	
Approach LOS					B						C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 66: Goodell & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	3272	161
v/c Ratio	0.85	0.28
Control Delay	16.2	23.6
Queue Delay	0.0	0.0
Total Delay	16.2	23.6
Queue Length 50th (ft)	369	64
Queue Length 95th (ft)	426	114
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3858	571
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.85	0.28

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	24	179	503	192	50	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.881				0.915	
Flt Protected	0.994			0.965		
Satd. Flow (prot)	1631	0	0	1798	1704	0
Flt Permitted	0.994			0.965		
Satd. Flow (perm)	1631	0	0	1798	1704	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	101			184	181	
Travel Time (s)	2.3			4.2	4.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	27	199	559	213	56	94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	226	0	0	772	150	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 68.2%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	24	179	503	192	50	85
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	27	199	559	213	56	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				184		
pX, platoon unblocked	0.53					
vC, conflicting volume	1434	103	150			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1374	103	150			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	48	79	61			
cM capacity (veh/h)	51	952	1431			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	226	772	150
Volume Left	27	559	0
Volume Right	199	0	94
cSH	310	1431	1700
Volume to Capacity	0.73	0.39	0.09
Queue Length 95th (ft)	133	47	0
Control Delay (s)	42.2	7.7	0.0
Lane LOS	E	A	
Approach Delay (s)	42.2	7.7	0.0
Approach LOS	E		

Intersection Summary			
Average Delay	13.5		
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	155	15	45	95	5	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988				0.876	
Flt Protected				0.984	0.996	
Satd. Flow (prot)	1840	0	0	1833	1625	0
Flt Permitted				0.984	0.996	
Satd. Flow (perm)	1840	0	0	1833	1625	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	293			173	355	
Travel Time (s)	6.7			3.9	8.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	172	17	50	106	6	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	0	0	156	73	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 30.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	155	15	45	95	5	60
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)	172	17	50	106	6	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	293			342		
pX, platoon unblocked						
vC, conflicting volume			189		386	181
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			189		386	181
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		99	92
cM capacity (veh/h)			1385		595	862

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	189	156	72
Volume Left	0	50	6
Volume Right	17	0	67
cSH	1700	1385	833
Volume to Capacity	0.11	0.04	0.09
Queue Length 95th (ft)	0	3	7
Control Delay (s)	0.0	2.7	9.7
Lane LOS		A	A
Approach Delay (s)	0.0	2.7	9.7
Approach LOS			A

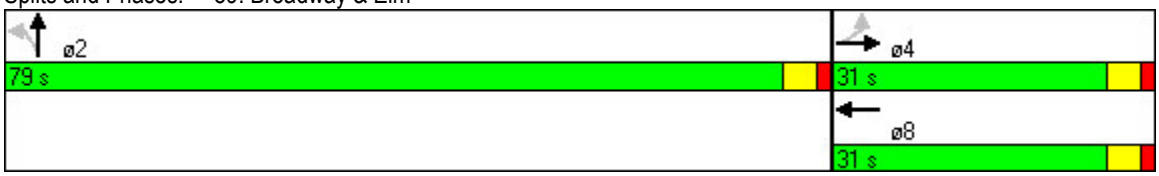
Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	70	0	0	230	25	140	2200	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.985			0.996				
Flt Protected		0.982						0.997				
Satd. Flow (prot)	0	3476	0	0	3486	0	0	5050	0	0	0	0
Flt Permitted		0.784						0.997				
Satd. Flow (perm)	0	2775	0	0	3486	0	0	5050	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			219			461			734	
Travel Time (s)		9.5			5.0			10.5			16.7	
Peak Hour Factor	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)	44	78	0	0	256	28	156	2444	67	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	284	0	0	2667	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	23.0	23.0			23.0		41.0	41.0				
Total Split (s)	31.0	31.0	0.0	0.0	31.0	0.0	79.0	79.0	0.0	0.0	0.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	0.0%	28.2%	0.0%	71.8%	71.8%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	26.3	26.3			26.3		74.3	74.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		27.3			27.3			75.3				
Actuated g/C Ratio		0.25			0.25			0.68				
v/c Ratio		0.18			0.33			0.77				
Control Delay		33.4			34.1			2.8				
Queue Delay		0.0			0.0			0.1				
Total Delay		33.4			34.1			2.9				
LOS		C			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		33.4			34.1			2.9				
Approach LOS		C			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 41 (37%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 67.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 89: Broadway & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	122	284	2667
v/c Ratio	0.18	0.33	0.77
Control Delay	33.4	34.1	2.8
Queue Delay	0.0	0.0	0.1
Total Delay	33.4	34.1	2.9
Queue Length 50th (ft)	35	84	39
Queue Length 95th (ft)	61	123	54
Internal Link Dist (ft)	339	139	381
Turn Bay Length (ft)			
Base Capacity (vph)	689	871	3459
Starvation Cap Reductn	0	0	144
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.18	0.33	0.80

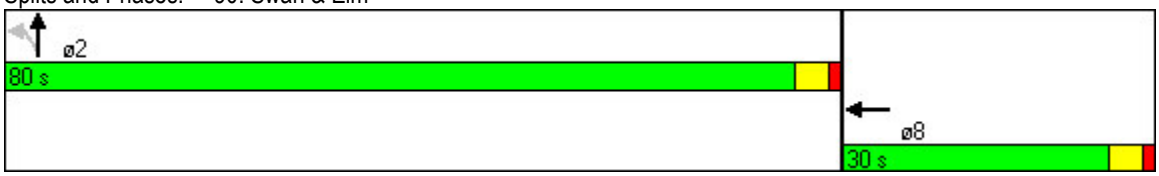
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	200	105	495	2985	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.91	1.00	1.00	1.00
Frt					0.957			0.998				
Flt Protected							0.950	0.999				
Satd. Flow (prot)	0	0	0	0	1818	0	1552	4887	0	0	0	0
Flt Permitted							0.950	0.999				
Satd. Flow (perm)	0	0	0	0	1818	0	1552	4887	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					1		250	10				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			208			801			316	
Travel Time (s)		8.2			4.7			18.2			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.71	0.81	0.76	0.81	0.88	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	0	0	282	130	651	3685	62	0	0	0
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	0	0	0	0	412	0	586	3812	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					21.2		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	80.0	80.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	27.3%	0.0%	72.7%	72.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		75.4	75.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					20		22	22				
Act Effct Green (s)					27.4		77.4	77.4				
Actuated g/C Ratio					0.25		0.70	0.70				
v/c Ratio					0.91		0.50	1.11				
Control Delay					65.5		5.5	71.8				
Queue Delay					0.0		0.0	4.0				
Total Delay					65.5		5.5	75.8				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E		A	E				
Approach Delay					65.5			66.4				
Approach LOS					E			E				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green, Master Intersection	
Natural Cycle: 130	
Control Type: Pretimed	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 66.4	Intersection LOS: E
Intersection Capacity Utilization 75.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 90: Swan & Elm



Lane Group	WBT	NBL	NBT
Lane Group Flow (vph)	412	586	3812
v/c Ratio	0.91	0.50	1.11
Control Delay	65.5	5.5	71.8
Queue Delay	0.0	0.0	4.0
Total Delay	65.5	5.5	75.8
Queue Length 50th (ft)	283	96	~1196
Queue Length 95th (ft)	297	111	#1049
Internal Link Dist (ft)	128		721
Turn Bay Length (ft)			
Base Capacity (vph)	454	1166	3442
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	28
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.91	0.50	1.12

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	80	0	60	270	0	0	0	0	50	1845	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt											0.977	
Flt Protected					0.991						0.999	
Satd. Flow (prot)	0	3539	0	0	3507	0	0	0	0	0	4963	0
Flt Permitted					0.884						0.999	
Satd. Flow (perm)	0	3539	0	0	3129	0	0	0	0	0	4963	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											72	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			419			255			685	
Travel Time (s)		5.1			9.5			5.8			15.6	
Peak Hour Factor	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)	0	89	0	67	300	0	0	0	0	56	2050	372
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	367	0	0	0	0	0	2478	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		24.0		24.0	24.0					41.0	41.0	
Total Split (s)	0.0	31.0	0.0	31.0	31.0	0.0	0.0	0.0	0.0	49.0	49.0	0.0
Total Split (%)	0.0%	38.8%	0.0%	38.8%	38.8%	0.0%	0.0%	0.0%	0.0%	61.3%	61.3%	0.0%
Maximum Green (s)		26.3		26.3	26.3					44.3	44.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		27.3			27.3						45.3	
Actuated g/C Ratio		0.34			0.34						0.57	
v/c Ratio		0.07			0.34						0.87	
Control Delay		18.1			20.8						8.9	
Queue Delay		0.0			0.0						0.0	
Total Delay		18.1			20.8						8.9	
LOS		B			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.1			20.8						8.9	
Approach LOS		B			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 39 (49%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 10.7	Intersection LOS: B
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 91: Broadway & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	89	367	2478
v/c Ratio	0.07	0.34	0.87
Control Delay	18.1	20.8	8.9
Queue Delay	0.0	0.0	0.0
Total Delay	18.1	20.8	8.9
Queue Length 50th (ft)	15	71	90
Queue Length 95th (ft)	31	106	102
Internal Link Dist (ft)	146	339	605
Turn Bay Length (ft)			
Base Capacity (vph)	1208	1068	2842
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.07	0.34	0.87

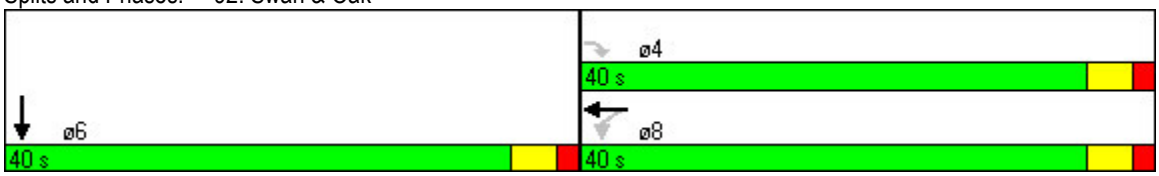
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	35	85	675	0	0	0	0	0	1150	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.86	0.86
Frt			0.850								0.993	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	2787	1770	3539	0	0	0	0	0	6363	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	2787	1770	3539	0	0	0	0	0	6363	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			41	24							17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			359			115			332	
Travel Time (s)		8.0			8.2			2.6			7.5	
Peak Hour Factor	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)	0	0	39	94	750	0	0	0	0	0	1278	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	39	94	750	0	0	0	0	0	1345	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			custom	Perm								
Protected Phases					8						6	
Permitted Phases			4	8								
Minimum Split (s)			20.8	20.8	20.8						40.0	
Total Split (s)	0.0	0.0	40.0	40.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Total Split (%)	0.0%	0.0%	50.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
Maximum Green (s)			35.2	35.2	35.2						35.2	
Yellow Time (s)			3.2	3.2	3.2						3.2	
All-Red Time (s)			1.6	1.6	1.6						1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.8	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)			5.0	5.0	5.0						5.0	
Flash Dont Walk (s)			11.0	11.0	11.0						11.0	
Pedestrian Calls (#/hr)			0	0	0						0	
Act Effct Green (s)			36.2	36.2	36.2						36.2	
Actuated g/C Ratio			0.45	0.45	0.45						0.45	
v/c Ratio			0.03	0.12	0.47						0.47	
Control Delay			4.2	10.2	16.4						8.5	
Queue Delay			0.0	0.0	0.6						0.1	
Total Delay			4.2	10.2	17.1						8.6	
LOS			A	B	B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					16.3						8.6	
Approach LOS					B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 75 (94%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 75.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 92: Swan & Oak



Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	39	94	750	1345
v/c Ratio	0.03	0.12	0.47	0.47
Control Delay	4.2	10.2	16.4	8.5
Queue Delay	0.0	0.0	0.6	0.1
Total Delay	4.2	10.2	17.1	8.6
Queue Length 50th (ft)	0	19	131	41
Queue Length 95th (ft)	8	45	178	74
Internal Link Dist (ft)			279	252
Turn Bay Length (ft)				
Base Capacity (vph)	1284	814	1601	2889
Starvation Cap Reductn	0	0	467	290
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.66	0.52

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	65	45	40	185	0	0	0	0	50	2140	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.945									0.993	
Flt Protected					0.991						0.999	
Satd. Flow (prot)	0	1760	0	0	1846	0	0	0	0	0	5045	0
Flt Permitted					0.929						0.999	
Satd. Flow (perm)	0	1760	0	0	1730	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8									19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			458			685			413	
Travel Time (s)		10.0			10.4			15.6			9.4	
Peak Hour Factor	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)	0	72	50	44	206	0	0	0	0	56	2378	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	250	0	0	0	0	0	2551	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	23.0	0.0	23.0	23.0	0.0	0.0	0.0	0.0	57.0	57.0	0.0
Total Split (%)	0.0%	28.8%	0.0%	28.8%	28.8%	0.0%	0.0%	0.0%	0.0%	71.3%	71.3%	0.0%
Maximum Green (s)		18.3		18.3	18.3					52.3	52.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		19.3			19.3						53.3	
Actuated g/C Ratio		0.24			0.24						0.67	
v/c Ratio		0.28			0.60						0.76	
Control Delay		25.2			33.9						6.1	
Queue Delay		0.0			0.0						0.0	
Total Delay		25.2			33.9						6.1	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		25.2			33.9						6.1	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 29 (36%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 93: Huron & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	122	250	2551
v/c Ratio	0.28	0.60	0.76
Control Delay	25.2	33.9	6.1
Queue Delay	0.0	0.0	0.0
Total Delay	25.2	33.9	6.1
Queue Length 50th (ft)	46	111	41
Queue Length 95th (ft)	92	186	45
Internal Link Dist (ft)	360	378	333
Turn Bay Length (ft)			
Base Capacity (vph)	431	417	3368
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.28	0.60	0.76

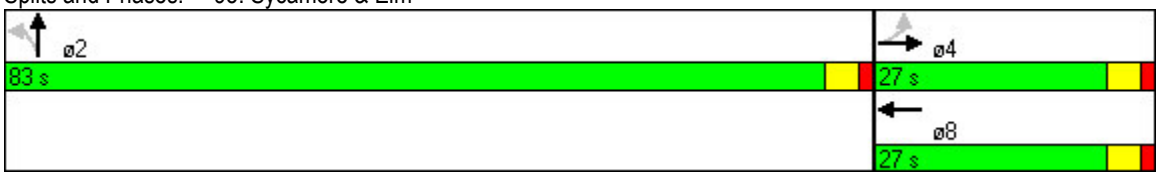
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	45	0	0	105	15	105	2115	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.983			0.997				
Flt Protected		0.977						0.998				
Satd. Flow (prot)	0	1820	0	0	1831	0	0	5060	0	0	0	0
Flt Permitted		0.824						0.998				
Satd. Flow (perm)	0	1535	0	0	1831	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					6			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		458			243			734			356	
Travel Time (s)		10.4			5.5			16.7			8.1	
Peak Hour Factor	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)	44	50	0	0	117	17	117	2350	50	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	94	0	0	134	0	0	2517	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.7	20.7			20.7		45.0	45.0				
Total Split (s)	27.0	27.0	0.0	0.0	27.0	0.0	83.0	83.0	0.0	0.0	0.0	0.0
Total Split (%)	24.5%	24.5%	0.0%	0.0%	24.5%	0.0%	75.5%	75.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	22.3	22.3			22.3		78.3	78.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		23.3			23.3			79.3				
Actuated g/C Ratio		0.21			0.21			0.72				
v/c Ratio		0.29			0.34			0.69				
Control Delay		39.3			38.0			2.7				
Queue Delay		0.0			0.0			0.3				
Total Delay		39.3			38.0			3.0				
LOS		D			D			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		39.3			38.0			3.0				
Approach LOS		D			D			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 64 (58%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 6.0	Intersection LOS: A
Intersection Capacity Utilization 61.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 95: Sycamore & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	94	134	2517
v/c Ratio	0.29	0.34	0.69
Control Delay	39.3	38.0	2.7
Queue Delay	0.0	0.0	0.3
Total Delay	39.3	38.0	3.0
Queue Length 50th (ft)	56	77	41
Queue Length 95th (ft)	105	135	71
Internal Link Dist (ft)	378	163	654
Turn Bay Length (ft)			
Base Capacity (vph)	325	393	3650
Starvation Cap Reductn	0	0	493
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.29	0.34	0.80

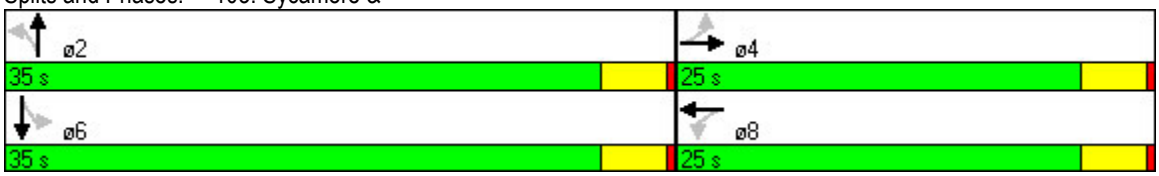
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	45	15	15	65	25	30	565	25	15	270	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.976			0.968			0.994			0.990	
Flt Protected		0.985			0.993			0.998			0.997	
Satd. Flow (prot)	0	1723	0	0	1691	0	0	3477	0	0	3394	0
Flt Permitted		0.915			0.964			0.929			0.919	
Satd. Flow (perm)	0	1601	0	0	1642	0	0	3236	0	0	3128	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			28			10			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			600			803			878	
Travel Time (s)		5.4			13.6			18.3			20.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	8%	8%	8%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	28	50	17	17	72	28	33	628	28	17	300	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	117	0	0	689	0	0	339	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.17			0.20			0.41			0.21	
Control Delay		12.5			11.8			7.3			7.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.5			11.8			7.3			7.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		12.5			11.8			7.3			7.8	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 44.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: Sycamore &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	95	117	689	339
v/c Ratio	0.17	0.20	0.41	0.21
Control Delay	12.5	11.8	7.3	7.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.5	11.8	7.3	7.8
Queue Length 50th (ft)	19	22	53	30
Queue Length 95th (ft)	47	53	70	50
Internal Link Dist (ft)	159	520	723	798
Turn Bay Length (ft)				
Base Capacity (vph)	571	593	1677	1625
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.20	0.41	0.21

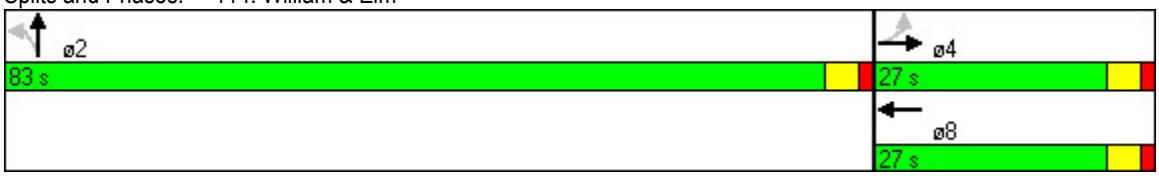
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	55	0	0	200	35	165	2375	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.978			0.999				
Flt Protected		0.996						0.997				
Satd. Flow (prot)	0	3525	0	0	3461	0	0	5065	0	0	0	0
Flt Permitted		0.927						0.997				
Satd. Flow (perm)	0	3281	0	0	3461	0	0	5065	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					7			3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		371			191			308			461	
Travel Time (s)		8.4			4.3			7.0			10.5	
Peak Hour Factor	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)	6	61	0	0	222	39	183	2639	22	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	261	0	0	2844	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	27.0	27.0	0.0	0.0	27.0	0.0	83.0	83.0	0.0	0.0	0.0	0.0
Total Split (%)	24.5%	24.5%	0.0%	0.0%	24.5%	0.0%	75.5%	75.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	22.3	22.3			22.3		78.3	78.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		23.3			23.3			79.3				
Actuated g/C Ratio		0.21			0.21			0.72				
v/c Ratio		0.10			0.35			0.78				
Control Delay		35.4			37.5			2.6				
Queue Delay		0.0			0.0			0.3				
Total Delay		35.4			37.5			2.9				
LOS		D			D			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.4			37.5			2.9				
Approach LOS		D			D			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 35 (32%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 63.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 114: William & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	67	261	2844
v/c Ratio	0.10	0.35	0.78
Control Delay	35.4	37.5	2.6
Queue Delay	0.0	0.0	0.3
Total Delay	35.4	37.5	2.9
Queue Length 50th (ft)	20	81	29
Queue Length 95th (ft)	40	120	32
Internal Link Dist (ft)	291	111	228
Turn Bay Length (ft)			
Base Capacity (vph)	695	739	3652
Starvation Cap Reductn	0	0	266
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.10	0.35	0.84

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	35	10	40	250	0	0	0	0	80	1875	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.967										
Flt Protected					0.993						0.998	
Satd. Flow (prot)	0	3422	0	0	3514	0	0	0	0	0	5075	0
Flt Permitted					0.911						0.998	
Satd. Flow (perm)	0	3422	0	0	3224	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		507			371			297			255	
Travel Time (s)		11.5			8.4			6.8			5.8	
Peak Hour Factor	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)	0	39	11	44	278	0	0	0	0	89	2083	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	322	0	0	0	0	0	2178	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	25.0	0.0	25.0	25.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	31.3%	0.0%	31.3%	31.3%	0.0%	0.0%	0.0%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)		20.3		20.3	20.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		21.3			21.3						51.3	
Actuated g/C Ratio		0.27			0.27						0.64	
v/c Ratio		0.05			0.38						0.67	
Control Delay		18.4			25.5						1.6	
Queue Delay		0.0			0.0						0.9	
Total Delay		18.4			25.5						2.5	
LOS		B			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.4			25.5						2.5	
Approach LOS		B			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 45 (56%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 115: William & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	50	322	2178
v/c Ratio	0.05	0.38	0.67
Control Delay	18.4	25.5	1.6
Queue Delay	0.0	0.0	0.9
Total Delay	18.4	25.5	2.5
Queue Length 50th (ft)	7	68	17
Queue Length 95th (ft)	20	105	20
Internal Link Dist (ft)	427	291	175
Turn Bay Length (ft)			
Base Capacity (vph)	919	858	3255
Starvation Cap Reductn	0	0	708
Spillback Cap Reductn	0	0	21
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.05	0.38	0.86

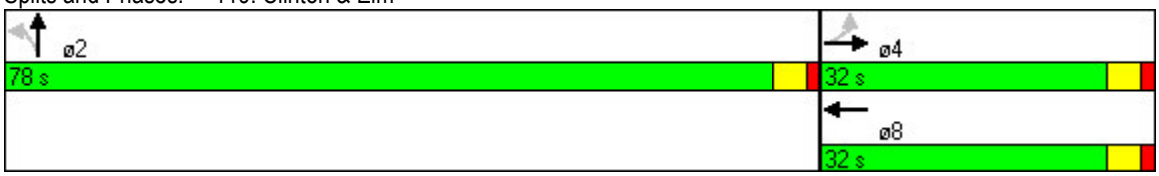
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	90	0	0	95	40	20	2540	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.951			0.997				
Flt Protected		0.988						0.999				
Satd. Flow (prot)	0	1836	0	0	1807	0	0	5021	0	0	0	0
Flt Permitted		0.894						0.999				
Satd. Flow (perm)	0	1661	0	0	1807	0	0	5021	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			191			734			308	
Travel Time (s)		8.2			4.3			16.7			7.0	
Peak Hour Factor	0.68	0.78	0.90	0.90	0.73	0.54	0.58	0.94	0.58	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	2%	2%	0%	0%	0%	3%	0%	2%	2%	2%
Adj. Flow (vph)	37	115	0	0	130	74	34	2702	60	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	0	0	204	0	0	2796	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.2	21.2			21.2		48.0	48.0				
Total Split (s)	32.0	32.0	0.0	0.0	32.0	0.0	78.0	78.0	0.0	0.0	0.0	0.0
Total Split (%)	29.1%	29.1%	0.0%	0.0%	29.1%	0.0%	70.9%	70.9%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	27.3	27.3			27.3		73.3	73.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.7	2.7	3.0	3.0	2.7	3.0	2.7	2.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			75.3				
Actuated g/C Ratio		0.27			0.27			0.68				
v/c Ratio		0.34			0.42			0.81				
Control Delay		35.3			35.7			2.4				
Queue Delay		0.0			0.0			0.2				
Total Delay		35.3			35.7			2.6				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D			D			A				
Approach Delay		35.3			35.7			2.6				
Approach LOS		D			D			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 28 (25%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 73.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 119: Clinton & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	152	204	2796
v/c Ratio	0.34	0.42	0.81
Control Delay	35.3	35.7	2.4
Queue Delay	0.0	0.0	0.2
Total Delay	35.3	35.7	2.6
Queue Length 50th (ft)	87	116	25
Queue Length 95th (ft)	124	145	26
Internal Link Dist (ft)	279	111	654
Turn Bay Length (ft)			
Base Capacity (vph)	442	485	3439
Starvation Cap Reductn	0	0	133
Spillback Cap Reductn	0	0	84
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.34	0.42	0.85

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	80	40	30	120	0	0	0	0	45	1775	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.955									0.993	
Flt Protected					0.990						0.999	
Satd. Flow (prot)	0	1779	0	0	1844	0	0	0	0	0	5045	0
Flt Permitted					0.932						0.999	
Satd. Flow (perm)	0	1779	0	0	1736	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8									15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		520			359			762			297	
Travel Time (s)		11.8			8.2			17.3			6.8	
Peak Hour Factor	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)	0	89	44	33	133	0	0	0	0	50	1972	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	166	0	0	0	0	0	2122	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					48.0	48.0	
Total Split (s)	0.0	32.0	0.0	32.0	32.0	0.0	0.0	0.0	0.0	48.0	48.0	0.0
Total Split (%)	0.0%	40.0%	0.0%	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	60.0%	60.0%	0.0%
Maximum Green (s)		27.3		27.3	27.3					43.3	43.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		28.3			28.3						44.3	
Actuated g/C Ratio		0.35			0.35						0.55	
v/c Ratio		0.21			0.27						0.76	
Control Delay		18.0			20.0						3.0	
Queue Delay		0.0			0.0						0.1	
Total Delay		18.0			20.0						3.1	
LOS		B			B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.0			20.0						3.1	
Approach LOS		B			B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 53 (66%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 58.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 120: Clinton & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	133	166	2122
v/c Ratio	0.21	0.27	0.76
Control Delay	18.0	20.0	3.0
Queue Delay	0.0	0.0	0.1
Total Delay	18.0	20.0	3.1
Queue Length 50th (ft)	43	58	13
Queue Length 95th (ft)	82	105	13
Internal Link Dist (ft)	440	279	217
Turn Bay Length (ft)			
Base Capacity (vph)	634	614	2800
Starvation Cap Reductn	0	0	72
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.21	0.27	0.78

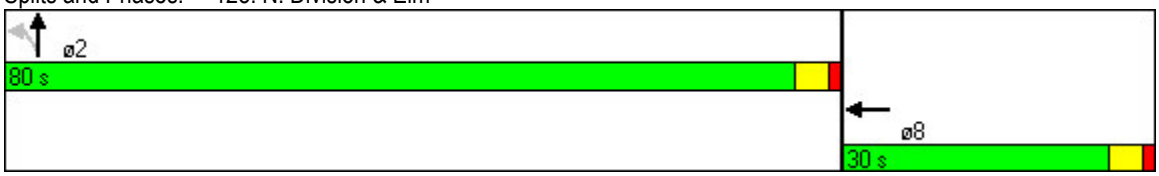
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	110	50	465	2410	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.953							
Flt Protected								0.992				
Satd. Flow (prot)	0	0	0	0	3373	0	0	5045	0	0	0	0
Flt Permitted								0.992				
Satd. Flow (perm)	0	0	0	0	3373	0	0	5045	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					5			85				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		349			195			317			734	
Travel Time (s)		7.9			4.4			7.2			16.7	
Peak Hour Factor	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)	0	0	0	0	122	56	517	2678	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	178	0	0	3195	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					20.6		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	80.0	80.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	27.3%	0.0%	72.7%	72.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		75.4	75.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					26.4			76.4				
Actuated g/C Ratio					0.24			0.69				
v/c Ratio					0.22			0.91				
Control Delay					33.4			7.5				
Queue Delay					0.0			3.5				
Total Delay					33.4			11.1				
LOS					C			B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					33.4			11.1				
Approach LOS					C			B				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 10 (9%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 67.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 128: N. Division & Elm



Lane Group	WBT	NBT
Lane Group Flow (vph)	178	3195
v/c Ratio	0.22	0.91
Control Delay	33.4	7.5
Queue Delay	0.0	3.5
Total Delay	33.4	11.1
Queue Length 50th (ft)	51	104
Queue Length 95th (ft)	83	256
Internal Link Dist (ft)	115	237
Turn Bay Length (ft)		
Base Capacity (vph)	813	3530
Starvation Cap Reductn	0	264
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.22	0.98

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	20	430	0	0	0	0	0	1280	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.966	
Flt Protected					0.998							
Satd. Flow (prot)	0	0	0	0	5075	0	0	0	0	0	4912	0
Flt Permitted					0.998							
Satd. Flow (perm)	0	0	0	0	5075	0	0	0	0	0	4912	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					10						142	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			349			277			762	
Travel Time (s)		8.2			7.9			6.3			17.3	
Peak Hour Factor	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)	0	0	0	22	478	0	0	0	0	0	1422	411
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	500	0	0	0	0	0	1833	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.7	20.7						47.0	
Total Split (s)	0.0	0.0	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	47.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	41.3%	41.3%	0.0%	0.0%	0.0%	0.0%	0.0%	58.8%	0.0%
Maximum Green (s)				28.3	28.3						42.3	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.5	1.5						1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					29.3						43.3	
Actuated g/C Ratio					0.37						0.54	
v/c Ratio					0.27						0.67	
Control Delay					17.9						2.5	
Queue Delay					0.0						0.0	
Total Delay					17.9						2.5	
LOS					B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					17.9						2.5	
Approach LOS					B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 68 (85%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 5.8	Intersection LOS: A
Intersection Capacity Utilization 48.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 129: N. Division & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	500	1833
v/c Ratio	0.27	0.67
Control Delay	17.9	2.5
Queue Delay	0.0	0.0
Total Delay	17.9	2.5
Queue Length 50th (ft)	61	0
Queue Length 95th (ft)	86	21
Internal Link Dist (ft)	269	682
Turn Bay Length (ft)		
Base Capacity (vph)	1865	2724
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.27	0.67

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	185	195	0	0	0	0	0	2990	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.998				
Flt Protected	0.950	0.988										
Satd. Flow (prot)	1610	3350	0	0	0	0	0	5075	0	0	0	0
Flt Permitted	0.950	0.988										
Satd. Flow (perm)	1610	3350	0	0	0	0	0	5075	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	2	2						5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			206			316			317	
Travel Time (s)		7.8			4.7			7.2			7.2	
Peak Hour Factor	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)	206	217	0	0	0	0	0	3322	44	0	0	0
Shared Lane Traffic (%)	33%											
Lane Group Flow (vph)	138	285	0	0	0	0	0	3366	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	21.0	21.0						50.0				
Total Split (s)	23.0	23.0	0.0	0.0	0.0	0.0	0.0	87.0	0.0	0.0	0.0	0.0
Total Split (%)	20.9%	20.9%	0.0%	0.0%	0.0%	0.0%	0.0%	79.1%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	18.4	18.4						82.4				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	1.4	1.4						1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	19.4	19.4						83.4				
Actuated g/C Ratio	0.18	0.18						0.76				
v/c Ratio	0.48	0.48						0.87				
Control Delay	46.6	43.6						1.4				
Queue Delay	0.0	0.0						31.9				
Total Delay	46.6	43.6						33.3				
LOS	D	D						C				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		44.6						33.3				
Approach LOS		D						C				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 6 (5%), Referenced to phase 2:NBT, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 34.6	Intersection LOS: C
Intersection Capacity Utilization 92.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 135: S Division & Elm

Lane Group	EBL	EBT	NBT
Lane Group Flow (vph)	138	285	3366
v/c Ratio	0.48	0.48	0.87
Control Delay	46.6	43.6	1.4
Queue Delay	0.0	0.0	31.9
Total Delay	46.6	43.6	33.3
Queue Length 50th (ft)	95	100	28
Queue Length 95th (ft)	165	146	m24
Internal Link Dist (ft)		265	236
Turn Bay Length (ft)			
Base Capacity (vph)	286	592	3849
Starvation Cap Reductn	0	0	696
Spillback Cap Reductn	0	0	101
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.48	0.48	1.07

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	215	75	0	0	0	0	0	0	165	1140	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									
Flt Protected											0.994	
Satd. Flow (prot)	0	5085	1583	0	0	0	0	0	0	0	6369	0
Flt Permitted											0.994	
Satd. Flow (perm)	0	5085	1583	0	0	0	0	0	0	0	6369	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			47								71	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		208			345			332			277	
Travel Time (s)		4.7			7.8			7.5			6.3	
Peak Hour Factor	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)	0	239	83	0	0	0	0	0	0	183	1267	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	239	83	0	0	0	0	0	0	0	1450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		20.8	20.8							47.0	47.0	
Total Split (s)	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	47.0	47.0	0.0
Total Split (%)	0.0%	41.3%	41.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%
Maximum Green (s)		28.2	28.2							42.2	42.2	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.6	1.6							1.6	1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.0	3.8	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		29.2	29.2								43.2	
Actuated g/C Ratio		0.36	0.36								0.54	
v/c Ratio		0.13	0.14								0.42	
Control Delay		17.2	9.6								1.5	
Queue Delay		0.0	0.0								0.1	
Total Delay		17.2	9.6								1.7	
LOS		B	A								A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		15.2									1.7	
Approach LOS		B									A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 73 (91%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 4.2	Intersection LOS: A
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 136: S Division & Oak

Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	239	83	1450
v/c Ratio	0.13	0.14	0.42
Control Delay	17.2	9.6	1.5
Queue Delay	0.0	0.0	0.1
Total Delay	17.2	9.6	1.7
Queue Length 50th (ft)	28	12	9
Queue Length 95th (ft)	45	40	13
Internal Link Dist (ft)	128		197
Turn Bay Length (ft)			
Base Capacity (vph)	1856	608	3472
Starvation Cap Reductn	0	0	865
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.13	0.14	0.56

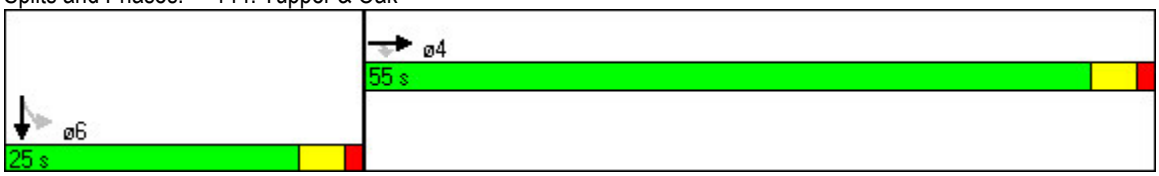
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	550	150	0	0	0	0	0	0	60	160	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									
Flt Protected											0.987	
Satd. Flow (prot)	0	3539	1583	0	0	0	0	0	0	0	3493	0
Flt Permitted											0.987	
Satd. Flow (perm)	0	3539	1583	0	0	0	0	0	0	0	3493	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			167								66	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		351			380			611			685	
Travel Time (s)		8.0			8.6			13.9			15.6	
Peak Hour Factor	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)	0	611	167	0	0	0	0	0	0	67	178	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	611	167	0	0	0	0	0	0	0	245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		45.0	45.0							20.6	20.6	
Total Split (s)	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0
Total Split (%)	0.0%	68.8%	68.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%	31.3%	0.0%
Maximum Green (s)		50.4	50.4							20.4	20.4	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.4	1.4							1.4	1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		51.4	51.4								21.4	
Actuated g/C Ratio		0.64	0.64								0.27	
v/c Ratio		0.27	0.16								0.25	
Control Delay		5.7	0.8								17.4	
Queue Delay		0.2	0.0								0.0	
Total Delay		5.9	0.8								17.4	
LOS		A	A								B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		4.8									17.4	
Approach LOS		A									B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 52 (65%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.27	
Intersection Signal Delay: 7.8	Intersection LOS: A
Intersection Capacity Utilization 42.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 144: Tupper & Oak



Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	611	167	245
v/c Ratio	0.27	0.16	0.25
Control Delay	5.7	0.8	17.4
Queue Delay	0.2	0.0	0.0
Total Delay	5.9	0.8	17.4
Queue Length 50th (ft)	34	0	36
Queue Length 95th (ft)	67	m3	65
Internal Link Dist (ft)	271		605
Turn Bay Length (ft)			
Base Capacity (vph)	2274	1077	983
Starvation Cap Reductn	880	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.44	0.16	0.25

Intersection Summary

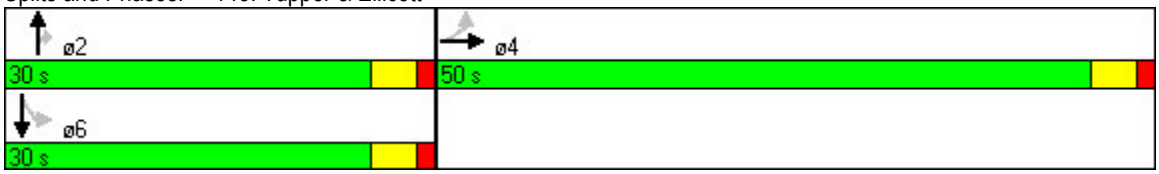
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	600	45	0	0	0	0	225	55	145	100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor		1.00										
Frt		0.985						0.995	0.850			
Flt Protected		0.994									0.975	
Satd. Flow (prot)	0	4969	0	0	0	0	0	1744	1504	0	2830	0
Flt Permitted		0.994									0.624	
Satd. Flow (perm)	0	4967	0	0	0	0	0	1744	1504	0	1811	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40						2	74			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	120	714	90	0	0	0	0	256	82	210	200	0
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	0	924	0	0	0	0	0	264	74	0	410	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	50.0	50.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	37.5%	37.5%	37.5%	0.0%
Maximum Green (s)	45.4	45.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		47.4						27.4	27.4		27.4	
Actuated g/C Ratio		0.59						0.34	0.34		0.34	
v/c Ratio		0.31						0.44	0.13		0.66	
Control Delay		7.0						23.1	5.6		26.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0						0.0	0.0		0.0	
Total Delay		7.0						23.1	5.6		26.9	
LOS		A						C	A		C	
Approach Delay		7.0						19.3			26.9	
Approach LOS		A						B			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 41 (51%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 44.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 145: Tupper & Ellicott



Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	924	264	74	410
v/c Ratio	0.31	0.44	0.13	0.66
Control Delay	7.0	23.1	5.6	26.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.0	23.1	5.6	26.9
Queue Length 50th (ft)	48	105	0	73
Queue Length 95th (ft)	60	170	13	62
Internal Link Dist (ft)	262	271		652
Turn Bay Length (ft)				
Base Capacity (vph)	2959	599	564	620
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.44	0.13	0.66

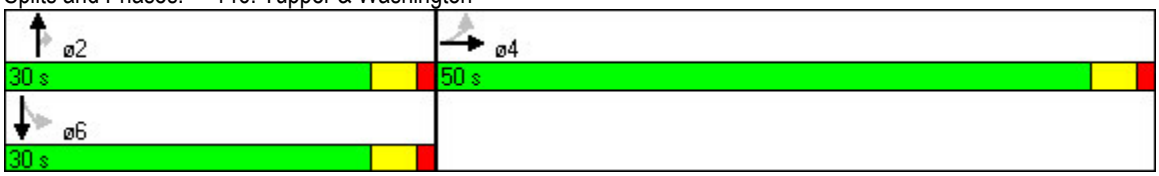
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	415	105	0	0	0	0	135	50	80	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964							0.850			
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	4955	0	0	0	0	0	1900	1615	1787	1863	0
Flt Permitted		0.998								0.583		
Satd. Flow (perm)	0	4955	0	0	0	0	0	1900	1615	1097	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157							53			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			342			356			718	
Travel Time (s)		6.5			7.8			8.1			16.3	
Peak Hour Factor	0.50	0.90	0.67	0.90	0.90	0.90	0.90	0.80	0.94	0.76	0.73	0.90
Heavy Vehicles (%)	0%	1%	0%	2%	2%	2%	2%	0%	0%	1%	2%	2%
Adj. Flow (vph)	30	461	157	0	0	0	0	169	53	105	274	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	648	0	0	0	0	0	169	53	105	274	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	50.0	50.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	37.5%	37.5%	37.5%	0.0%
Maximum Green (s)	45.4	45.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	3.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		47.4						27.4	26.4	27.4	27.4	
Actuated g/C Ratio		0.59						0.34	0.33	0.34	0.34	
v/c Ratio		0.22						0.26	0.09	0.28	0.43	
Control Delay		0.3						20.4	6.3	26.4	27.9	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		0.3						20.4	6.3	26.4	27.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A						C	A	C	C	
Approach Delay		0.3						17.0			27.5	
Approach LOS		A						B			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 34 (43%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 32.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 146: Tupper & Washington



Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	648	169	53	105	274
v/c Ratio	0.22	0.26	0.09	0.28	0.43
Control Delay	0.3	20.4	6.3	26.4	27.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.3	20.4	6.3	26.4	27.9
Queue Length 50th (ft)	0	60	0	42	116
Queue Length 95th (ft)	0	93	23	69	143
Internal Link Dist (ft)	208	276			638
Turn Bay Length (ft)					
Base Capacity (vph)	3000	651	568	376	638
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.26	0.09	0.28	0.43

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	590	0	0	0	0	0	725	5	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.999				
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3536	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3536	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								1				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		380			319			560			585	
Travel Time (s)		8.6			7.3			12.7			13.3	
Peak Hour Factor	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)	0	656	0	0	0	0	0	806	6	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	656	0	0	0	0	0	812	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type												
Protected Phases		4						2				
Permitted Phases												
Minimum Split (s)		45.0						21.2				
Total Split (s)	0.0	55.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	68.8%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)		49.8						19.8				
Yellow Time (s)		3.2						3.2				
All-Red Time (s)		2.0						2.0				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.2	3.0	3.0	3.0	3.0	3.0	4.2	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0						5.0				
Flash Dont Walk (s)		11.0						11.0				
Pedestrian Calls (#/hr)		0						0				
Act Effct Green (s)		50.8						20.8				
Actuated g/C Ratio		0.64						0.26				
v/c Ratio		0.29						0.88				
Control Delay		3.4						41.4				
Queue Delay		0.0						0.0				
Total Delay		3.4						41.4				
LOS		A						D				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		3.4						41.4				
Approach LOS		A						D				

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 52 (65%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 24.4	Intersection LOS: C
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 152: Tupper & Elm St

Lane Group	EBT	NBT
Lane Group Flow (vph)	656	812
v/c Ratio	0.29	0.88
Control Delay	3.4	41.4
Queue Delay	0.0	0.0
Total Delay	3.4	41.4
Queue Length 50th (ft)	27	204
Queue Length 95th (ft)	37	#308
Internal Link Dist (ft)	300	480
Turn Bay Length (ft)		
Base Capacity (vph)	2247	920
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.29	0.88

Intersection Summary

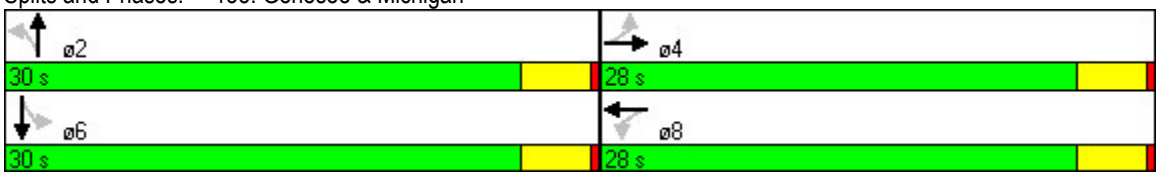
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	90	20	30	140	65	15	410	10	45	225	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.988			0.963			0.997			0.987	
Flt Protected		0.972			0.994			0.998			0.992	
Satd. Flow (prot)	0	3399	0	0	1783	0	0	3522	0	0	3465	0
Flt Permitted		0.698			0.942			0.941			0.851	
Satd. Flow (perm)	0	2441	0	0	1690	0	0	3320	0	0	2973	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			42			5			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			1157			878			441	
Travel Time (s)		11.8			26.3			20.0			10.0	
Peak Hour Factor	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)	161	100	22	33	156	72	17	456	11	50	250	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	0	0	261	0	0	484	0	0	328	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	48.3%	48.3%	0.0%	48.3%	48.3%	0.0%	51.7%	51.7%	0.0%	51.7%	51.7%	0.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		25.0			25.0			27.0			27.0	
Actuated g/C Ratio		0.43			0.43			0.47			0.47	
v/c Ratio		0.27			0.35			0.31			0.23	
Control Delay		10.7			10.8			10.3			9.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.7			10.8			10.3			9.2	
LOS		B			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.7			10.8			10.3			9.2	
Approach LOS		B			B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 155: Genesee & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	283	261	484	328
v/c Ratio	0.27	0.35	0.31	0.23
Control Delay	10.7	10.8	10.3	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.7	10.8	10.3	9.2
Queue Length 50th (ft)	29	47	51	31
Queue Length 95th (ft)	52	93	79	53
Internal Link Dist (ft)	438	1077	798	361
Turn Bay Length (ft)				
Base Capacity (vph)	1063	752	1548	1396
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.35	0.31	0.23

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	660	640	210	75	20	290	340	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	0.850
Flt Protected		0.974				0.986		
Satd. Flow (prot)	0	4951	1538	0	0	1736	2760	1509
Flt Permitted		0.974				0.986		
Satd. Flow (perm)	0	4951	1538	0	0	1736	2760	1509
Right Turn on Red								Yes
Satd. Flow (RTOR)								106
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	815	736	228	106	32	354	378	106
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	1551	228	0	0	492	378	106
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	custom
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	6
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	25.0
Total Split (s)	55.0	55.0	55.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	68.8%	68.8%	68.8%	31.3%	31.3%	31.3%	31.3%	31.3%
Maximum Green (s)	50.4	50.4	50.4	20.4	20.4	20.4	20.4	20.4
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	4.1
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
Act Effct Green (s)		50.4	50.4			20.9	20.9	20.9
Actuated g/C Ratio		0.63	0.63			0.26	0.26	0.26
v/c Ratio		0.50	0.24			1.08	0.52	0.22
Control Delay		6.1	5.6			100.9	28.4	6.5
Queue Delay		0.1	0.4			0.0	0.0	0.0
Total Delay		6.2	6.0			100.9	28.4	6.5

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		A	A			F	C	A
Approach Delay		6.2				100.9		
Approach LOS		A				F		

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 45 (56%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 26.1	Intersection LOS: C
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 159: Pearl & Main

Lane Group	WBT	WBR	NBT	SBR	SBR2
Lane Group Flow (vph)	1551	228	492	378	106
v/c Ratio	0.50	0.24	1.08	0.52	0.22
Control Delay	6.1	5.6	100.9	28.4	6.5
Queue Delay	0.1	0.4	0.0	0.0	0.0
Total Delay	6.2	6.0	100.9	28.4	6.5
Queue Length 50th (ft)	78	29	~284	92	0
Queue Length 95th (ft)	106	56	#405	138	15
Internal Link Dist (ft)	206		625		
Turn Bay Length (ft)					
Base Capacity (vph)	3119	969	454	721	473
Starvation Cap Reductn	476	367	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.38	1.08	0.52	0.22

Intersection Summary

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

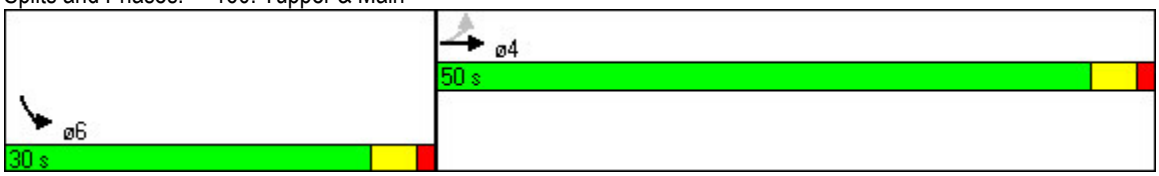
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	75	545	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.994				
Satd. Flow (prot)	0	5055	0	0	1863	0
Flt Permitted		0.994				
Satd. Flow (perm)	0	5055	0	0	1863	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		161	288		705	
Travel Time (s)		3.7	6.5		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	606	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	689	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm					
Protected Phases		4			6	
Permitted Phases	4					
Minimum Split (s)	40.0	40.0			20.6	
Total Split (s)	50.0	50.0	0.0	0.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	37.5%	0.0%
Maximum Green (s)	45.4	45.4			25.4	
Yellow Time (s)	3.2	3.2			3.2	
All-Red Time (s)	1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.6	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0	
Act Effct Green (s)		46.4				
Actuated g/C Ratio		0.58				
v/c Ratio		0.23				
Control Delay		8.4				
Queue Delay		0.0				
Total Delay		8.4				
LOS		A				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		8.4				
Approach LOS		A				

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 27 (34%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 15.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 160: Tupper & Main



Lane Group	EBT
Lane Group Flow (vph)	689
v/c Ratio	0.23
Control Delay	8.4
Queue Delay	0.0
Total Delay	8.4
Queue Length 50th (ft)	56
Queue Length 95th (ft)	75
Internal Link Dist (ft)	81
Turn Bay Length (ft)	
Base Capacity (vph)	2932
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.23

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	160	2410	470	95	525	0	0	240	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.977						0.972	
Flt Protected					0.997		0.950					
Satd. Flow (prot)	0	0	0	0	6242	0	1770	1863	0	0	3440	0
Flt Permitted					0.997		0.354					
Satd. Flow (perm)	0	0	0	0	6242	0	659	1863	0	0	3440	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					87						29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	178	2678	522	106	583	0	0	267	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	3378	0	106	583	0	0	328	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	15.0	50.0	0.0	0.0	20.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%	17.6%	58.8%	0.0%	0.0%	23.5%	0.0%
Maximum Green (s)				46.0	46.0		11.0				16.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

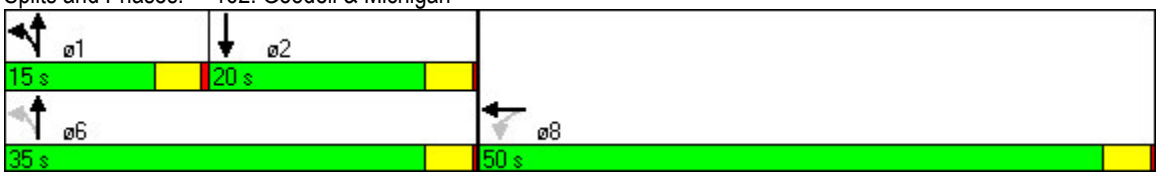
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	35.0
Total Split (%)	41%
Maximum Green (s)	31.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					47.0		32.0	32.0			17.0	
Actuated g/C Ratio					0.55		0.38	0.38			0.20	
v/c Ratio					0.97		0.26	0.83			0.46	
Control Delay					28.0		19.5	36.4			29.7	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					28.0		19.5	36.4			29.7	
LOS					C		B	D			C	
Approach Delay					28.0			33.8			29.7	
Approach LOS					C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 29.0 — Intersection LOS: C
Intersection Capacity Utilization 79.5% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 162: Goodell & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	3378	106	583	328
v/c Ratio	0.97	0.26	0.83	0.46
Control Delay	28.0	19.5	36.4	29.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.0	19.5	36.4	29.7
Queue Length 50th (ft)	461	37	277	74
Queue Length 95th (ft)	#601	71	#457	115
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	3490	405	701	711
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.97	0.26	0.83	0.46

Intersection Summary

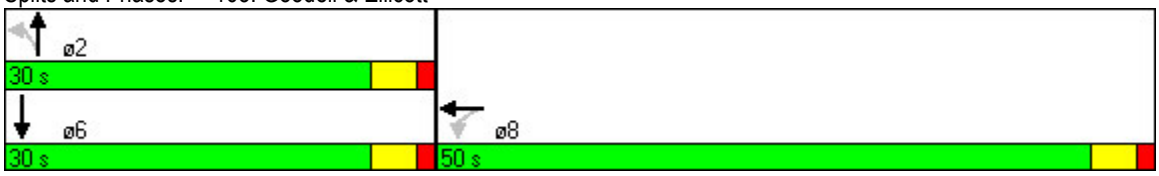
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	70	1710	795	50	195	0	0	205	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.99							
Frt					0.954						0.985	
Flt Protected					0.998			0.989				
Satd. Flow (prot)	0	0	0	0	6131	0	0	1862	0	0	1835	0
Flt Permitted					0.998			0.882				
Satd. Flow (perm)	0	0	0	0	6131	0	0	1661	0	0	1835	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					246						8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		326			375			732			791	
Travel Time (s)		7.4			8.5			16.6			18.0	
Confl. Peds. (#/hr)						3						
Peak Hour Factor	0.90	0.90	0.90	0.50	0.85	0.83	0.78	0.88	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	1%	0%	4%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	140	2012	958	64	222	0	0	228	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	3110	0	0	286	0	0	256	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Minimum Split (s)				40.0	40.0		25.0	25.0			20.6	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	30.0	30.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	62.5%	62.5%	0.0%	37.5%	37.5%	0.0%	0.0%	37.5%	0.0%
Maximum Green (s)				45.4	45.4		25.4	25.4			25.4	
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)					47.4			27.4			26.4	
Actuated g/C Ratio					0.59			0.34			0.33	
v/c Ratio					0.90dr			0.50			0.42	
Control Delay					14.5			16.6			22.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					25.2			0.0			0.0	
Total Delay					39.8			16.6			22.7	
LOS					D			B			C	
Approach Delay					39.8			16.6			22.7	
Approach LOS					D			B			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 46 (58%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 36.8	Intersection LOS: D
Intersection Capacity Utilization 74.6%	ICU Level of Service D
Analysis Period (min) 15	
dr Defacto Right Lane. Recode with 1 though lane as a right lane.	

Splits and Phases: 163: Goodell & Ellicott



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	3110	286	256
v/c Ratio	0.90dr	0.50	0.42
Control Delay	14.5	16.6	22.7
Queue Delay	25.2	0.0	0.0
Total Delay	39.8	16.6	22.7
Queue Length 50th (ft)	306	61	95
Queue Length 95th (ft)	319	91	160
Internal Link Dist (ft)	295	652	711
Turn Bay Length (ft)			
Base Capacity (vph)	3733	569	611
Starvation Cap Reductn	772	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	1.05	0.50	0.42

Intersection Summary

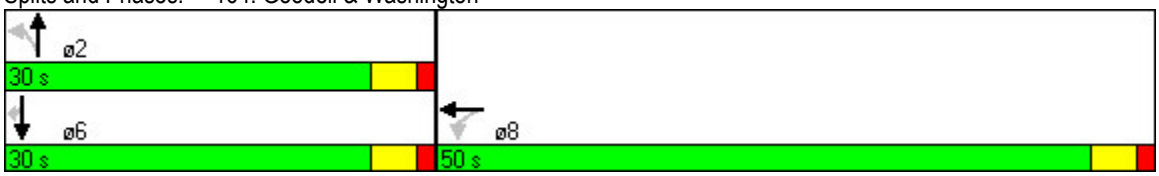
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	85	1000	45	60	180	0	0	110	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.994							0.850
Flt Protected					0.996			0.986				
Satd. Flow (prot)	0	0	0	0	6335	0	0	1787	0	0	1792	1429
Flt Permitted					0.996			0.884				
Satd. Flow (perm)	0	0	0	0	6335	0	0	1602	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					17							35
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	94	1124	50	80	200	0	0	126	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1268	0	0	280	0	0	126	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	30.0	30.0	0.0	0.0	30.0	30.0
Total Split (%)	0.0%	0.0%	0.0%	62.5%	62.5%	0.0%	37.5%	37.5%	0.0%	0.0%	37.5%	37.5%
Maximum Green (s)				45.4	45.4		25.4	25.4			25.4	25.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					47.4			27.4			27.4	27.4
Actuated g/C Ratio					0.59			0.34			0.34	0.34
v/c Ratio					0.34			0.51			0.21	0.07
Control Delay					1.6			17.0			19.8	7.0
Queue Delay					0.2			0.0			0.0	0.0
Total Delay					1.7			17.0			19.8	7.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			B			B	A
Approach Delay					1.7			17.0			17.0	
Approach LOS					A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 53 (66%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 42.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 164: Goodell & Washington



Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	1268	280	126	35
v/c Ratio	0.34	0.51	0.21	0.07
Control Delay	1.6	17.0	19.8	7.0
Queue Delay	0.2	0.0	0.0	0.0
Total Delay	1.7	17.0	19.8	7.0
Queue Length 50th (ft)	13	119	44	0
Queue Length 95th (ft)	15	196	80	7
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3760	549	614	512
Starvation Cap Reductn	1306	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.52	0.51	0.21	0.07

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	90	45	50	255	0	0	0	0	70	1885	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.950										0.850
Flt Protected					0.992						0.998	
Satd. Flow (prot)	0	3362	0	0	3511	0	0	0	0	0	5075	1583
Flt Permitted					0.877						0.998	
Satd. Flow (perm)	0	3362	0	0	3104	0	0	0	0	0	5075	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15										232
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			465			349			422	
Travel Time (s)		3.8			10.6			7.9			9.6	
Peak Hour Factor	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)	0	100	50	56	283	0	0	0	0	78	2094	389
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	339	0	0	0	0	0	2172	389
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Minimum Split (s)		20.9		20.9	20.9					47.0	47.0	47.0
Total Split (s)	0.0	23.0	0.0	23.0	23.0	0.0	0.0	0.0	0.0	57.0	57.0	57.0
Total Split (%)	0.0%	28.8%	0.0%	28.8%	28.8%	0.0%	0.0%	0.0%	0.0%	71.3%	71.3%	71.3%
Maximum Green (s)		18.1		18.1	18.1					52.1	52.1	52.1
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		1.7		1.7	1.7					1.7	1.7	1.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.9	3.0	3.9	3.9	3.0	3.0	3.0	3.0	3.9	3.9	3.9
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		19.1			19.1						53.1	53.1
Actuated g/C Ratio		0.24			0.24						0.66	0.66
v/c Ratio		0.18			0.46						0.64	0.34
Control Delay		22.5			28.4						9.0	3.1
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		22.5			28.4						9.0	3.1
LOS		C			C						A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.5			28.4						8.1	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 10 (13%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 312: Genesee & Oak

Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	150	339	2172	389
v/c Ratio	0.18	0.46	0.64	0.34
Control Delay	22.5	28.4	9.0	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.5	28.4	9.0	3.1
Queue Length 50th (ft)	28	76	199	26
Queue Length 95th (ft)	52	116	238	58
Internal Link Dist (ft)	89	385	342	
Turn Bay Length (ft)				
Base Capacity (vph)	814	741	3369	1129
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.46	0.64	0.34

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	120	0	0	120	20	160	2020	185	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.979				0.850			
Flt Protected		0.987						0.996				
Satd. Flow (prot)	0	3493	0	0	3465	0	0	5065	1583	0	0	0
Flt Permitted		0.836						0.996				
Satd. Flow (perm)	0	2959	0	0	3465	0	0	5065	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					14				206			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		465			518			476			260	
Travel Time (s)		10.6			11.8			10.8			5.9	
Peak Hour Factor	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)	50	133	0	0	133	22	178	2244	206	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	155	0	0	2422	206	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm		Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Minimum Split (s)	24.0	24.0			24.0		42.0	42.0	42.0			
Total Split (s)	29.0	29.0	0.0	0.0	29.0	0.0	81.0	81.0	81.0	0.0	0.0	0.0
Total Split (%)	26.4%	26.4%	0.0%	0.0%	26.4%	0.0%	73.6%	73.6%	73.6%	0.0%	0.0%	0.0%
Maximum Green (s)	24.2	24.2			24.2		76.2	76.2	76.2			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	1.6	1.6			1.6		1.6	1.6	1.6			
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.8	3.8	3.0	3.0	3.8	3.0	3.8	3.8	3.8	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)		25.2			25.2			77.2	77.2			
Actuated g/C Ratio		0.23			0.23			0.70	0.70			
v/c Ratio		0.27			0.19			0.68	0.18			
Control Delay		36.1			31.8			23.0	3.9			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		36.1			31.8			23.0	3.9			
LOS		D			C			C	A			
Approach Delay		36.1			31.8			21.5				
Approach LOS		D			C			C				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 1 (1%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 313: Genesee & Elm St

Lane Group	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	183	155	2422	206
v/c Ratio	0.27	0.19	0.68	0.18
Control Delay	36.1	31.8	23.0	3.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	36.1	31.8	23.0	3.9
Queue Length 50th (ft)	56	42	633	32
Queue Length 95th (ft)	88	71	689	m55
Internal Link Dist (ft)	385	438	396	
Turn Bay Length (ft)				200
Base Capacity (vph)	678	805	3555	1172
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.19	0.68	0.18

Intersection Summary

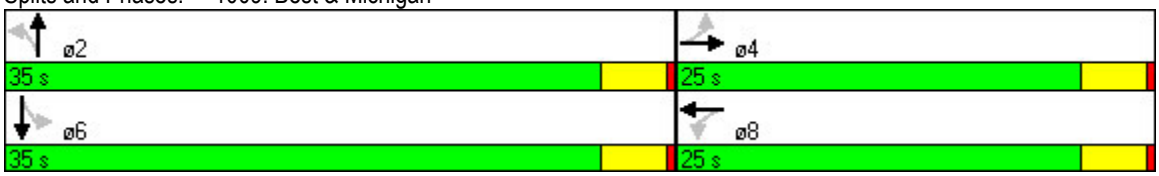
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	185	50	20	160	5	25	115	10	35	200	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.996			0.991			0.995	
Flt Protected		0.999			0.995			0.992			0.993	
Satd. Flow (prot)	0	1809	0	0	1846	0	0	1831	0	0	1840	0
Flt Permitted		0.994			0.957			0.936			0.950	
Satd. Flow (perm)	0	1800	0	0	1776	0	0	1728	0	0	1761	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			3			9			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			349			643			576	
Travel Time (s)		21.9			7.9			14.6			13.1	
Peak Hour Factor	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)	6	206	56	22	178	6	28	128	11	39	222	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	268	0	0	206	0	0	167	0	0	272	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
v/c Ratio		0.40			0.32			0.18			0.29	
Control Delay		14.9			15.1			7.5			8.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.9			15.1			7.5			8.6	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		14.9			15.1			7.5			8.6	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 42.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1009: Best & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	268	206	167	272
v/c Ratio	0.40	0.32	0.18	0.29
Control Delay	14.9	15.1	7.5	8.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.9	15.1	7.5	8.6
Queue Length 50th (ft)	63	51	27	48
Queue Length 95th (ft)	117	96	53	87
Internal Link Dist (ft)	884	269	563	496
Turn Bay Length (ft)				
Base Capacity (vph)	676	653	926	942
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.40	0.32	0.18	0.29

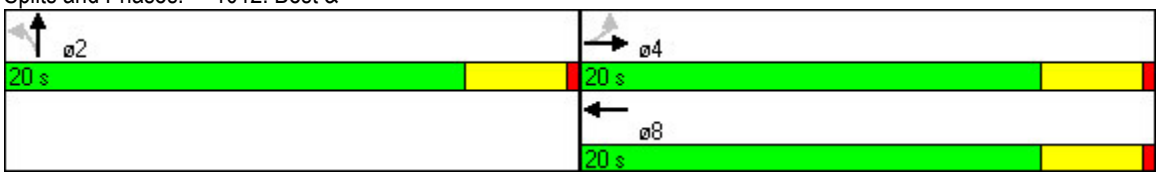
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	130	0	0	135	30	35	35	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.976			0.960				
Flt Protected		0.998						0.982				
Satd. Flow (prot)	0	1859	0	0	1818	0	0	3336	0	0	0	0
Flt Permitted		0.990						0.982				
Satd. Flow (perm)	0	1844	0	0	1818	0	0	3336	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					33			28				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		178			964			653			187	
Travel Time (s)		4.0			21.9			14.8			4.3	
Peak Hour Factor	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)	6	144	0	0	150	33	39	39	28	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	183	0	0	106	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	20.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	0.0%	50.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0			16.0		16.0	16.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.0			17.0			17.0				
Actuated g/C Ratio		0.42			0.42			0.42				
v/c Ratio		0.19			0.23			0.07				
Control Delay		8.0			7.0			5.6				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.0			7.0			5.6				
LOS		A			A			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.0			7.0			5.6				
Approach LOS		A			A			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 40	
Actuated Cycle Length: 40	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 20.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1012: Best &



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	150	183	106
v/c Ratio	0.19	0.23	0.07
Control Delay	8.0	7.0	5.6
Queue Delay	0.0	0.0	0.0
Total Delay	8.0	7.0	5.6
Queue Length 50th (ft)	19	19	4
Queue Length 95th (ft)	43	46	14
Internal Link Dist (ft)	98	884	573
Turn Bay Length (ft)			
Base Capacity (vph)	784	792	1434
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.19	0.23	0.07

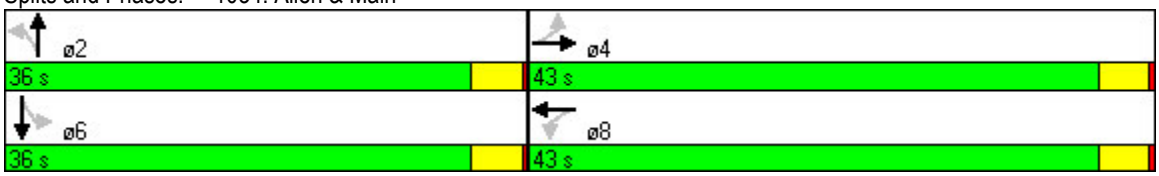
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	20	110	5	25	5	20	150	5	5	410	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.935			0.980			0.995			0.985	
Flt Protected		0.979			0.993			0.994			0.999	
Satd. Flow (prot)	0	1705	0	0	1813	0	0	3500	0	0	5004	0
Flt Permitted		0.860			0.966			0.886			0.938	
Satd. Flow (perm)	0	1498	0	0	1763	0	0	3120	0	0	4698	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83			6			5			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		319			288			287			353	
Travel Time (s)		7.3			6.5			6.5			8.0	
Peak Hour Factor	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)	111	22	122	6	28	6	22	167	6	6	456	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	255	0	0	40	0	0	195	0	0	512	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	43.0	43.0	0.0	43.0	43.0	0.0	36.0	36.0	0.0	36.0	36.0	0.0
Total Split (%)	54.4%	54.4%	0.0%	54.4%	54.4%	0.0%	45.6%	45.6%	0.0%	45.6%	45.6%	0.0%
Maximum Green (s)	39.0	39.0		39.0	39.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	0.0	-1.0	0.0	0.0	0.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	3.0	4.0	4.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		39.0			39.0			33.0			33.0	
Actuated g/C Ratio		0.49			0.49			0.42			0.42	
v/c Ratio		0.33			0.05			0.15			0.26	
Control Delay		9.3			9.4			14.3			14.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.3			9.4			14.3			14.6	
LOS		A			A			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.3			9.4			14.3			14.6	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 79	
Actuated Cycle Length: 79	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 43.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1034: Allen & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	255	40	195	512
v/c Ratio	0.33	0.05	0.15	0.26
Control Delay	9.3	9.4	14.3	14.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.3	9.4	14.3	14.6
Queue Length 50th (ft)	46	8	29	54
Queue Length 95th (ft)	93	23	50	78
Internal Link Dist (ft)	239	208	207	273
Turn Bay Length (ft)				
Base Capacity (vph)	782	873	1306	1979
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.33	0.05	0.15	0.26

Intersection Summary

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	805	935	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.88	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	3539	2787	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	3539	2787	0	0	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	260			560	477	
Travel Time (s)	5.9			12.7	10.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	894	1039	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	894	1039	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	500	0	0	0	0	935
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			969	284	
Travel Time (s)	7.3			22.0	6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	556	0	0	0	0	1039
Shared Lane Traffic (%)						
Lane Group Flow (vph)	556	0	0	0	0	1039
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	310	2800	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	3539	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	422			611	490	
Travel Time (s)	9.6			13.9	11.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	344	3111	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	344	3111	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 239.7%	ICU Level of Service H
Analysis Period (min) 15	

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	2800	3040	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	3433	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	3433	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	223			542	780	
Travel Time (s)	5.1			12.3	17.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	3111	3378	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	3111	3378	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 239.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	540	100	115	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.977			
Flt Protected						0.987
Satd. Flow (prot)	0	0	3458	0	0	3493
Flt Permitted						0.987
Satd. Flow (perm)	0	0	3458	0	0	3493
Link Speed (mph)	30		30			30
Link Distance (ft)	547		441			294
Travel Time (s)	12.4		10.0			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	600	111	128	372
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	711	0	0	500
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 37.4%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	540	100	115	335
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	600	111	128	372
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			441			636
pX, platoon unblocked	0.96	0.96			0.96	
vC, conflicting volume	1097	356			711	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	987	245			616	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			86	
cM capacity (veh/h)	203	725			922	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	400	311	252	248
Volume Left	0	0	128	0
Volume Right	0	111	0	0
cSH	1700	1700	922	1700
Volume to Capacity	0.24	0.18	0.14	0.15
Queue Length 95th (ft)	0	0	12	0
Control Delay (s)	0.0	0.0	5.5	0.0
Lane LOS			A	
Approach Delay (s)	0.0		2.8	
Approach LOS				

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	125	55	40	140	55	30	255	25	65	485	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.966			0.968			0.988			0.993	
Flt Protected		0.991			0.992			0.995			0.994	
Satd. Flow (prot)	0	1783	0	0	1789	0	0	3479	0	0	5019	0
Flt Permitted		0.874			0.894			0.868			0.884	
Satd. Flow (perm)	0	1573	0	0	1612	0	0	3035	0	0	4464	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			20			11			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		111			158			910			474	
Travel Time (s)		2.5			3.6			20.7			10.8	
Peak Hour Factor	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)	44	139	61	44	156	61	33	283	28	72	539	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	0	261	0	0	344	0	0	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	1 6	
Permitted Phases	4			8			2			1 6		
Detector Phase	4	4		8	8		2	2		1	1 6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		10.0		
Total Split (s)	33.0	33.0	0.0	33.0	33.0	0.0	29.0	29.0	0.0	22.0	73.0	0.0
Total Split (%)	39.3%	39.3%	0.0%	39.3%	39.3%	0.0%	34.5%	34.5%	0.0%	26.2%	86.9%	0.0%
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		16.0		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		5.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5		

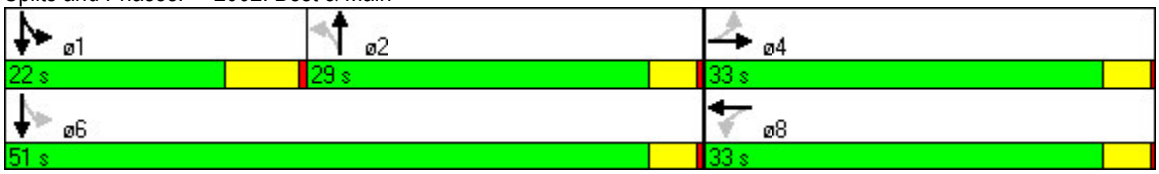
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	51.0
Total Split (%)	61%
Maximum Green (s)	47.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-3.0	-3.0	-1.0
Total Lost Time (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
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		
Recall Mode	Min	Min		Min	Min		Max	Max		Max		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0	0		0	0				
Act Effct Green (s)		16.5			16.5			26.1			48.2	
Actuated g/C Ratio		0.23			0.23			0.37			0.68	
v/c Ratio		0.64			0.67			0.30			0.20	
Control Delay		29.8			31.3			17.2			4.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		29.8			31.3			17.2			4.7	
LOS		C			C			B			A	
Approach Delay		29.8			31.3			17.2			4.7	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 84
Actuated Cycle Length: 70.7
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 16.4 — Intersection LOS: B
Intersection Capacity Utilization 46.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2002: Best & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	244	261	344	639
v/c Ratio	0.64	0.67	0.30	0.20
Control Delay	29.8	31.3	17.2	4.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	29.8	31.3	17.2	4.7
Queue Length 50th (ft)	87	95	52	29
Queue Length 95th (ft)	155	166	96	58
Internal Link Dist (ft)	31	78	830	394
Turn Bay Length (ft)				
Base Capacity (vph)	683	698	1128	3198
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.36	0.37	0.30	0.20

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	160	90	25	140	20	80	245	15	35	525	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.957			0.986			0.993			0.979	
Flt Protected		0.994			0.993			0.988			0.997	
Satd. Flow (prot)	0	1772	0	0	1824	0	0	3472	0	0	4964	0
Flt Permitted		0.953			0.929			0.753			0.906	
Satd. Flow (perm)	0	1699	0	0	1706	0	0	2646	0	0	4511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			9			11			48	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		250			335			338			910	
Travel Time (s)		5.7			7.6			7.7			20.7	
Peak Hour Factor	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)	39	178	100	28	156	22	89	272	17	39	583	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	317	0	0	206	0	0	378	0	0	722	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	14.0	60.0	0.0	32.0	32.0	0.0
Total Split (%)	38.7%	38.7%	0.0%	38.7%	38.7%	0.0%	18.7%	80.0%	0.0%	42.7%	42.7%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0			28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

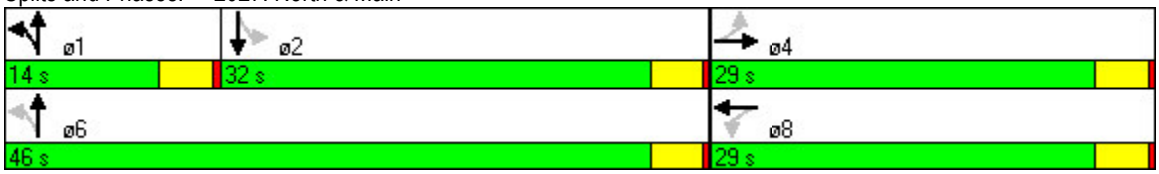
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	46.0
Total Split (%)	61%
Maximum Green (s)	42.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		None			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		17.2			17.2			41.5			29.3	
Actuated g/C Ratio		0.27			0.27			0.64			0.45	
v/c Ratio		0.67			0.45			0.21			0.35	
Control Delay		26.1			22.0			5.6			12.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.1			22.0			5.6			12.4	
LOS		C			C			A			B	
Approach Delay		26.1			22.0			5.6			12.4	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 64.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 14.7 — Intersection LOS: B
Intersection Capacity Utilization 53.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2027: North & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	317	206	378	722
v/c Ratio	0.67	0.45	0.21	0.35
Control Delay	26.1	22.0	5.6	12.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.1	22.0	5.6	12.4
Queue Length 50th (ft)	98	64	25	58
Queue Length 95th (ft)	178	120	57	110
Internal Link Dist (ft)	170	255	258	830
Turn Bay Length (ft)				
Base Capacity (vph)	708	696	1918	2065
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.30	0.20	0.35

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	5	30	360	25	35	795
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.886		0.990			
Flt Protected	0.992					0.998
Satd. Flow (prot)	1491	0	3340	0	0	5026
Flt Permitted	0.992					0.908
Satd. Flow (perm)	1491	0	3340	0	0	4573
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	33		18			
Link Speed (mph)	30		30			30
Link Distance (ft)	383		474			728
Travel Time (s)	8.7		10.8			16.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	12%	12%	7%	7%	3%	3%
Adj. Flow (vph)	6	33	400	28	39	883
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	428	0	0	922
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Maximum Green (s)	21.0		51.0		51.0	51.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	6.4		68.1			68.1
Actuated g/C Ratio	0.08		0.89			0.89
v/c Ratio	0.25		0.14			0.23
Control Delay	19.3		1.3			1.4
Queue Delay	0.0		0.0			0.0
Total Delay	19.3		1.3			1.4
LOS	B		A			A
Approach Delay	19.3		1.3			1.4
Approach LOS	B		A			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 76.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.25
Intersection Signal Delay: 1.9 — Intersection LOS: A
Intersection Capacity Utilization 40.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2101: Dodge & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	39	428	922
v/c Ratio	0.25	0.14	0.23
Control Delay	19.3	1.3	1.4
Queue Delay	0.0	0.0	0.0
Total Delay	19.3	1.3	1.4
Queue Length 50th (ft)	3	13	22
Queue Length 95th (ft)	31	26	41
Internal Link Dist (ft)	303	394	648
Turn Bay Length (ft)			
Base Capacity (vph)	434	2969	4063
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.09	0.14	0.23

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	40	60	15	30	5	55	215	10	5	460	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.929			0.986			0.995			0.997	
Flt Protected		0.993			0.985			0.990			0.999	
Satd. Flow (prot)	0	1718	0	0	1809	0	0	1835	0	0	1855	0
Flt Permitted		0.953			0.924			0.904			0.996	
Satd. Flow (perm)	0	1649	0	0	1697	0	0	1676	0	0	1850	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67			6			5			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			388			675			662	
Travel Time (s)		8.6			8.8			15.3			15.0	
Peak Hour Factor	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)	17	44	67	17	33	6	61	239	11	6	511	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	128	0	0	56	0	0	311	0	0	528	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	14.0	51.0	0.0	23.0	23.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%	23.3%	85.0%	0.0%	38.3%	38.3%	0.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		10.0			19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	37.0
Total Split (%)	62%
Maximum Green (s)	33.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		Max			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		8.5			8.5			34.5			20.3	
Actuated g/C Ratio		0.18			0.18			0.74			0.43	
v/c Ratio		0.36			0.18			0.24			0.66	
Control Delay		12.8			16.8			3.4			17.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.8			16.8			3.4			17.4	
LOS		B			B			A			B	
Approach Delay		12.8			16.8			3.4			17.4	
Approach LOS		B			B			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 46.7
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 12.5 — Intersection LOS: B
Intersection Capacity Utilization 57.3% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Carlton & Michigan

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	128	56	311	528
v/c Ratio	0.36	0.18	0.24	0.66
Control Delay	12.8	16.8	3.4	17.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.8	16.8	3.4	17.4
Queue Length 50th (ft)	15	12	21	114
Queue Length 95th (ft)	50	35	55	#266
Internal Link Dist (ft)	297	308	595	582
Turn Bay Length (ft)				
Base Capacity (vph)	754	741	1277	805
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.08	0.24	0.66

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	90	40	35	140	25	45	375	25	5	850	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.960			0.983			0.992			0.995	
Flt Protected		0.998			0.991			0.995				
Satd. Flow (prot)	0	1785	0	0	1815	0	0	1839	0	0	1853	0
Flt Permitted		0.998			0.991			0.995				
Satd. Flow (perm)	0	1785	0	0	1815	0	0	1839	0	0	1853	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			295	
Travel Time (s)		7.4			17.0			9.7			6.7	
Peak Hour Factor	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)	6	100	44	39	156	28	50	417	28	6	944	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	223	0	0	495	0	0	989	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	90	40	35	140	25	45	375	25	5	850	35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	100	44	39	156	28	50	417	28	6	944	39

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	150	222	494	989
Volume Left (vph)	6	39	50	6
Volume Right (vph)	44	28	28	39
Hadj (s)	-0.14	-0.01	0.02	0.01
Departure Headway (s)	7.9	7.7	6.6	6.6
Degree Utilization, x	0.33	0.47	0.91	1.80
Capacity (veh/h)	419	445	533	553
Control Delay (s)	14.7	17.4	44.6	385.6
Approach Delay (s)	14.7	17.4	44.6	385.6
Approach LOS	B	C	E	F

Intersection Summary			
Delay	220.6		
HCM Level of Service	F		
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	75	10	75	140	5	15	80	20	15	120	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.985			0.997			0.977			0.994	
Flt Protected		0.997			0.983			0.993			0.995	
Satd. Flow (prot)	0	1829	0	0	1826	0	0	1807	0	0	3500	0
Flt Permitted		0.997			0.983			0.993			0.995	
Satd. Flow (perm)	0	1829	0	0	1826	0	0	1807	0	0	3500	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		287			325			1308			290	
Travel Time (s)		6.5			7.4			29.7			6.6	
Peak Hour Factor	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)	6	83	11	83	156	6	17	89	22	17	133	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	245	0	0	128	0	0	156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	75	10	75	140	5	15	80	20	15	120	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	83	11	83	156	6	17	89	22	17	133	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	100	244	128	83	72
Volume Left (vph)	6	83	17	17	0
Volume Right (vph)	11	6	22	0	6
Hadj (s)	-0.02	0.09	-0.04	0.13	-0.02
Departure Headway (s)	5.0	4.9	5.1	5.7	5.5
Degree Utilization, x	0.14	0.33	0.18	0.13	0.11
Capacity (veh/h)	668	699	658	593	610
Control Delay (s)	8.7	10.2	9.2	8.3	8.0
Approach Delay (s)	8.7	10.2	9.2	8.2	
Approach LOS	A	B	A	A	

Intersection Summary			
Delay	9.3		
HCM Level of Service	A		
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	160	290	10	75	415
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.892		0.995			
Flt Protected	0.990					0.992
Satd. Flow (prot)	1645	0	5060	0	0	3511
Flt Permitted	0.990					0.992
Satd. Flow (perm)	1645	0	5060	0	0	3511
Link Speed (mph)	30		30			30
Link Distance (ft)	287		565			287
Travel Time (s)	6.5		12.8			6.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	178	322	11	83	461
Shared Lane Traffic (%)						
Lane Group Flow (vph)	222	0	333	0	0	544
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 41.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	40	160	290	10	75	415
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	44	178	322	11	83	461
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			565			287
pX, platoon unblocked	0.98					
vC, conflicting volume	725	113			333	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	687	113			333	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	81			93	
cM capacity (veh/h)	349	918			1223	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	222	129	129	76	237	307
Volume Left	44	0	0	0	83	0
Volume Right	178	0	0	11	0	0
cSH	692	1700	1700	1700	1223	1700
Volume to Capacity	0.32	0.08	0.08	0.04	0.07	0.18
Queue Length 95th (ft)	35	0	0	0	5	0
Control Delay (s)	12.6	0.0	0.0	0.0	3.3	0.0
Lane LOS	B				A	
Approach Delay (s)	12.6	0.0			1.4	
Approach LOS	B					

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	45	75	5	20	5	65	155	10	30	265	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.944			0.976			0.994			0.970	
Flt Protected		0.984			0.991			0.986			0.996	
Satd. Flow (prot)	0	1730	0	0	1802	0	0	1826	0	0	3419	0
Flt Permitted		0.900			0.955			0.826			0.923	
Satd. Flow (perm)	0	1583	0	0	1736	0	0	1529	0	0	3169	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		59			6			7			83	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1103			233			662			363	
Travel Time (s)		25.1			5.3			15.0			8.3	
Peak Hour Factor	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)	67	50	83	6	22	6	72	172	11	33	294	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	200	0	0	34	0	0	255	0	0	410	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.41			0.07			0.27			0.21	
Control Delay		15.1			14.3			6.0			4.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.1			14.3			6.0			4.3	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		15.1			14.3			6.0			4.3	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 7.5	Intersection LOS: A
Intersection Capacity Utilization 49.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: High & Michigan

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	200	34	255	410
v/c Ratio	0.41	0.07	0.27	0.21
Control Delay	15.1	14.3	6.0	4.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.1	14.3	6.0	4.3
Queue Length 50th (ft)	40	7	35	22
Queue Length 95th (ft)	90	25	65	38
Internal Link Dist (ft)	1023	153	582	283
Turn Bay Length (ft)				
Base Capacity (vph)	491	496	946	1986
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.41	0.07	0.27	0.21

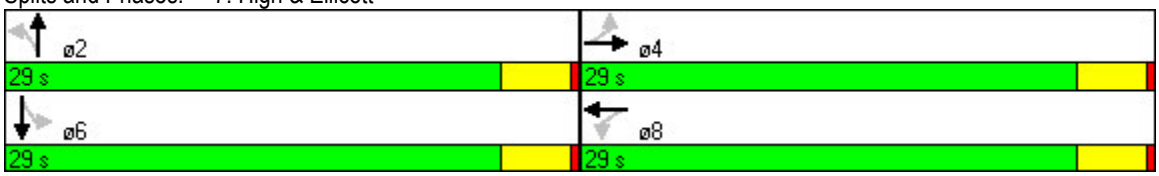
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	225	30	25	135	35	40	350	70	0	830	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.976			0.979				
Flt Protected		0.996			0.994			0.996				
Satd. Flow (prot)	0	1827	0	0	1807	0	0	1816	0	0	1863	0
Flt Permitted		0.975			0.944			0.366				
Satd. Flow (perm)	0	1789	0	0	1716	0	0	667	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			25			20				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			1103			363			184	
Travel Time (s)		3.8			25.1			8.3			4.2	
Peak Hour Factor	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)	22	250	33	28	150	39	44	389	78	0	922	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	305	0	0	217	0	0	511	0	0	922	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		26.0			26.0			26.0			26.0	
Actuated g/C Ratio		0.45			0.45			0.45			0.45	
v/c Ratio		0.38			0.28			1.65			1.10	
Control Delay		11.8			10.0			325.9			83.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.8			10.0			325.9			83.7	
LOS		B			B			F			F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.8			10.0			325.9			83.7	
Approach LOS		B			B			F			F	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 1.65	
Intersection Signal Delay: 127.6	Intersection LOS: F
Intersection Capacity Utilization 80.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: High & Ellicott



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	305	217	511	922
v/c Ratio	0.38	0.28	1.65	1.10
Control Delay	11.8	10.0	325.9	83.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.8	10.0	325.9	83.7
Queue Length 50th (ft)	63	39	~268	~379
Queue Length 95th (ft)	114	77	#332	#575
Internal Link Dist (ft)	89	1023	283	104
Turn Bay Length (ft)				
Base Capacity (vph)	810	783	310	835
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.38	0.28	1.65	1.10

Intersection Summary

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

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lane Configurations							
Volume (vph)	115	160	410	65	110	490	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95	
Frt	0.921		0.980				
Flt Protected	0.980					0.991	
Satd. Flow (prot)	1681	0	4984	0	0	3507	
Flt Permitted	0.980					0.782	
Satd. Flow (perm)	1681	0	4984	0	0	2768	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	94		49				
Link Speed (mph)	30		30			30	
Link Distance (ft)	293		353			353	
Travel Time (s)	6.7		8.0			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	128	178	456	72	122	544	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	306	0	528	0	0	666	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		1		1	1	
Detector Template							
Leading Detector (ft)	50		50		50	50	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	50		50		50	50	
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Turn Type					custom		
Protected Phases	8		2		1	1 6	6
Permitted Phases					6		
Detector Phase	8		2		1	1 6	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0		4.0
Minimum Split (s)	20.0		20.0		8.0		20.0
Total Split (s)	27.0	0.0	36.0	0.0	14.0	64.0	50.0
Total Split (%)	35.1%	0.0%	46.8%	0.0%	18.2%	83.1%	65%
Maximum Green (s)	23.0		32.0		10.0		46.0
Yellow Time (s)	3.5		3.5		3.5		3.5
All-Red Time (s)	0.5		0.5		0.5		0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lead/Lag			Lag		Lead		
Lead-Lag Optimize?			Yes		Yes		
Vehicle Extension (s)	3.0		3.0		3.0		3.0
Recall Mode	Min		Max		None		Max
Walk Time (s)	5.0		5.0				5.0
Flash Dont Walk (s)	11.0		11.0				11.0
Pedestrian Calls (#/hr)	0		0				0
Act Effct Green (s)	15.2		33.9			47.2	
Actuated g/C Ratio	0.22		0.49			0.69	
v/c Ratio	0.68		0.21			0.33	
Control Delay	24.6		10.0			5.3	
Queue Delay	0.0		0.0			0.0	
Total Delay	24.6		10.0			5.3	
LOS	C		B			A	
Approach Delay	24.6		10.0			5.3	
Approach LOS	C		B			A	

Intersection Summary

Area Type: Other
Cycle Length: 77
Actuated Cycle Length: 68.5
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 10.9 — Intersection LOS: B
Intersection Capacity Utilization 52.3% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: High & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	306	528	666
v/c Ratio	0.68	0.21	0.33
Control Delay	24.6	10.0	5.3
Queue Delay	0.0	0.0	0.0
Total Delay	24.6	10.0	5.3
Queue Length 50th (ft)	80	39	45
Queue Length 95th (ft)	156	72	97
Internal Link Dist (ft)	213	273	273
Turn Bay Length (ft)			
Base Capacity (vph)	652	2493	2028
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.47	0.21	0.33

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	20	110	0	0	0	40	290	10	5	350	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.890						0.996			0.993	
Flt Protected		0.998						0.994			0.999	
Satd. Flow (prot)	0	1655	0	0	0	0	0	1844	0	0	1848	0
Flt Permitted		0.998						0.931			0.996	
Satd. Flow (perm)	0	1655	0	0	0	0	0	1727	0	0	1842	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		122						5			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			376			922			675	
Travel Time (s)		8.3			8.5			21.0			15.3	
Peak Hour Factor	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)	6	22	122	0	0	0	44	322	11	6	389	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	0	0	0	377	0	0	417	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm			Perm		
Protected Phases		4						2			6	
Permitted Phases	4						2			6		
Minimum Split (s)	20.0	20.0					20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0					36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5					3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5					0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0					5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.0						37.0			37.0	
Actuated g/C Ratio		0.28						0.62			0.62	
v/c Ratio		0.27						0.35			0.37	
Control Delay		6.9						6.7			6.7	
Queue Delay		0.0						0.0			0.0	
Total Delay		6.9						6.7			6.7	
LOS		A						A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		6.9						6.7			6.7	
Approach LOS		A						A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 55.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: Virginia & Michigan

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	150	377	417
v/c Ratio	0.27	0.35	0.37
Control Delay	6.9	6.7	6.7
Queue Delay	0.0	0.0	0.0
Total Delay	6.9	6.7	6.7
Queue Length 50th (ft)	7	56	62
Queue Length 95th (ft)	43	97	105
Internal Link Dist (ft)	283	842	595
Turn Bay Length (ft)			
Base Capacity (vph)	556	1067	1139
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.27	0.35	0.37

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	70	40	480	60	5	920
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.951		0.985			
Flt Protected	0.969					
Satd. Flow (prot)	1717	0	1835	0	0	1863
Flt Permitted	0.969					
Satd. Flow (perm)	1717	0	1835	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	735		148			425
Travel Time (s)	16.7		3.4			9.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	44	533	67	6	1022
Shared Lane Traffic (%)						
Lane Group Flow (vph)	122	0	600	0	0	1028
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 65.4%	ICU Level of Service C
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	40	480	60	5	920
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	78	44	533	67	6	1022
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			939			
pX, platoon unblocked						
vC, conflicting volume	1600	567			600	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1600	567			600	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	33	92			99	
cM capacity (veh/h)	116	523			977	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	122	600	1028
Volume Left	78	0	6
Volume Right	44	67	0
cSH	162	1700	977
Volume to Capacity	0.76	0.35	0.01
Queue Length 95th (ft)	118	0	0
Control Delay (s)	75.1	0.0	0.2
Lane LOS	F		A
Approach Delay (s)	75.1	0.0	0.2
Approach LOS	F		

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	120	20	10	130	20	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981				0.919	
Flt Protected				0.996	0.980	
Satd. Flow (prot)	1827	0	0	1855	1678	0
Flt Permitted				0.996	0.980	
Satd. Flow (perm)	1827	0	0	1855	1678	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	747			377	583	
Travel Time (s)	17.0			8.6	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	133	22	11	144	22	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	0	0	155	55	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	120	20	10	130	20	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	133	22	11	144	22	33

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	156	156	56
Volume Left (vph)	0	11	22
Volume Right (vph)	22	0	33
Hadj (s)	-0.05	0.05	-0.25
Departure Headway (s)	4.1	4.2	4.3
Degree Utilization, x	0.18	0.18	0.07
Capacity (veh/h)	851	833	773
Control Delay (s)	8.0	8.2	7.6
Approach Delay (s)	8.0	8.2	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	5	50	25	10	245	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.962		0.981	
Flt Protected		0.995			0.959	
Satd. Flow (prot)	0	1853	1792	0	1752	0
Flt Permitted		0.995			0.959	
Satd. Flow (perm)	0	1853	1792	0	1752	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		735	363		583	
Travel Time (s)		16.7	8.3		13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	56	28	11	272	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	62	39	0	316	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	5	50	25	10	245	40
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	56	28	11	272	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)			363			
pX, platoon unblocked						
vC, conflicting volume	39				100	33
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39				100	33
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				70	96
cM capacity (veh/h)	1571				896	1040

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	61	39	317
Volume Left	6	0	272
Volume Right	0	11	44
cSH	1571	1700	913
Volume to Capacity	0.00	0.02	0.35
Queue Length 95th (ft)	0	0	39
Control Delay (s)	0.7	0.0	11.0
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	11.0
Approach LOS			B

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	500	275	345	645	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.952				0.865	
Flt Protected				0.983		
Satd. Flow (prot)	1773	0	0	1831	1611	0
Flt Permitted				0.983		
Satd. Flow (perm)	1773	0	0	1831	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	791			148	443	
Travel Time (s)	18.0			3.4	10.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	556	306	383	717	0	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	862	0	0	1100	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 109.4%		ICU Level of Service H	
Analysis Period (min) 15			

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	500	275	345	645	0	45
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)	556	306	383	717	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	791					
pX, platoon unblocked						
vC, conflicting volume			861		2192	708
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			861		2192	708
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			51		100	88
cM capacity (veh/h)			781		25	435

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	861	1100	50
Volume Left	0	383	0
Volume Right	306	0	50
cSH	1700	781	435
Volume to Capacity	0.51	0.49	0.12
Queue Length 95th (ft)	0	69	10
Control Delay (s)	0.0	12.6	14.4
Lane LOS		B	B
Approach Delay (s)	0.0	12.6	14.4
Approach LOS			B

Intersection Summary			
Average Delay	7.2		
Intersection Capacity Utilization	109.4%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	100	20	50	115	10	170	105	125	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.992			0.958				
Flt Protected		0.991			0.986			0.979				
Satd. Flow (prot)	0	1813	0	0	1822	0	0	1747	0	0	0	0
Flt Permitted		0.991			0.986			0.979				
Satd. Flow (perm)	0	1813	0	0	1822	0	0	1747	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			1080			316			653	
Travel Time (s)		6.8			24.5			7.2			14.8	
Peak Hour Factor	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)	28	111	22	56	128	11	189	117	139	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	0	195	0	0	445	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 44.8%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	100	20	50	115	10	170	105	125	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	28	111	22	56	128	11	189	117	139	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	161	194	444
Volume Left (vph)	28	56	189
Volume Right (vph)	22	11	139
Hadj (s)	-0.01	0.06	-0.07
Departure Headway (s)	5.3	5.4	4.8
Degree Utilization, x	0.24	0.29	0.59
Capacity (veh/h)	617	619	717
Control Delay (s)	10.0	10.5	14.5
Approach Delay (s)	10.0	10.5	14.5
Approach LOS	B	B	B

Intersection Summary			
Delay	12.6		
HCM Level of Service	B		
Intersection Capacity Utilization	44.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	145	45	35	95	15	35	160	60	15	190	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.986				0.850		0.991	
Flt Protected		0.999			0.988			0.991			0.997	
Satd. Flow (prot)	0	1803	0	0	1815	0	0	1846	1583	0	1840	0
Flt Permitted		0.992			0.823			0.929			0.980	
Satd. Flow (perm)	0	1791	0	0	1512	0	0	1730	1583	0	1809	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			8				67		12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			412			330			643	
Travel Time (s)		24.5			9.4			7.5			14.6	
Peak Hour Factor	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)	6	161	50	39	106	17	39	178	67	17	211	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	217	0	0	162	0	0	217	67	0	245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	51.0	51.0	51.0	51.0	51.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	28.2%	28.2%	0.0%	71.8%	71.8%	71.8%	71.8%	71.8%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		13.4			13.4			49.8	49.8		49.8	
Actuated g/C Ratio		0.19			0.19			0.72	0.72		0.72	
v/c Ratio		0.60			0.54			0.17	0.06		0.19	
Control Delay		29.7			30.2			4.0	1.3		3.8	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		29.7			30.2			4.0	1.3		3.8	
LOS		C			C			A	A		A	
Approach Delay		29.7			30.2			3.4			3.8	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 71
Actuated Cycle Length: 69.2
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 14.6 — Intersection LOS: B
Intersection Capacity Utilization 51.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 21: North & Michigan

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	217	162	217	67	245
v/c Ratio	0.60	0.54	0.17	0.06	0.19
Control Delay	29.7	30.2	4.0	1.3	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	30.2	4.0	1.3	3.8
Queue Length 50th (ft)	74	57	24	0	25
Queue Length 95th (ft)	136	111	52	10	56
Internal Link Dist (ft)	1000	332	250		563
Turn Bay Length (ft)					
Base Capacity (vph)	455	378	1245	1158	1305
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.48	0.43	0.17	0.06	0.19

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	5	20	20	35	50	0	560	10	20	715	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.934			0.935			0.997				
Flt Protected		0.981			0.991						0.999	
Satd. Flow (prot)	0	1707	0	0	1726	0	0	5070	0	0	3536	0
Flt Permitted		0.815			0.927						0.932	
Satd. Flow (perm)	0	1418	0	0	1615	0	0	5070	0	0	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			56			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		401			457			736			698	
Travel Time (s)		9.1			10.4			16.7			15.9	
Peak Hour Factor	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)	17	6	22	22	39	56	0	622	11	22	794	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	117	0	0	633	0	0	816	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.4			8.4			59.0			59.0	
Actuated g/C Ratio		0.12			0.12			0.81			0.81	
v/c Ratio		0.24			0.49			0.15			0.30	
Control Delay		20.2			23.8			2.2			2.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.2			23.8			2.2			2.9	
LOS		C			C			A			A	
Approach Delay		20.2			23.8			2.2			2.9	
Approach LOS		C			C			A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 72.6	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 4.6	Intersection LOS: A
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 27: Delta Sonic & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	45	117	633	816
v/c Ratio	0.24	0.49	0.15	0.30
Control Delay	20.2	23.8	2.2	2.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.2	23.8	2.2	2.9
Queue Length 50th (ft)	9	26	18	40
Queue Length 95th (ft)	35	67	35	77
Internal Link Dist (ft)	321	377	656	618
Turn Bay Length (ft)				
Base Capacity (vph)	427	508	4119	2679
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.11	0.23	0.15	0.30

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	0	15	200	135	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950			0.996		
Satd. Flow (prot)	1770	0	0	1855	1863	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1770	0	0	1855	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			182	316	
Travel Time (s)	14.9			4.1	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	0	17	222	150	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	239	150	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	15	0	15	200	135	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	0	17	222	150	0

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	17	239	150
Volume Left (vph)	17	17	0
Volume Right (vph)	0	0	0
Hadj (s)	0.23	0.05	0.03
Departure Headway (s)	5.0	4.1	4.2
Degree Utilization, x	0.02	0.27	0.18
Capacity (veh/h)	662	854	842
Control Delay (s)	8.1	8.7	8.1
Approach Delay (s)	8.1	8.7	8.1
Approach LOS	A	A	A

Intersection Summary			
Delay	8.5		
HCM Level of Service	A		
Intersection Capacity Utilization	31.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	0	25	15	0	40	10	510	5	15	440	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.932			0.865			0.998			0.997	
Flt Protected		0.976		0.950				0.999			0.998	
Satd. Flow (prot)	0	1694	0	1770	0	0	0	5070	0	0	3522	0
Flt Permitted		0.976		0.950				0.999			0.998	
Satd. Flow (perm)	0	1694	0	1770	0	0	0	5070	0	0	3522	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		213			655			353			338	
Travel Time (s)		4.8			14.9			8.0			7.7	
Peak Hour Factor	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)	28	0	28	17	0	44	11	567	6	17	489	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	17	44	0	0	584	0	0	517	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	0	25	15	0	40	10	510	5	15	440	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	28	0	28	17	0	44	11	567	6	17	489	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)								353			338	
pX, platoon unblocked	0.95	0.95	0.95	0.95	0.95		0.95					
vC, conflicting volume	783	1122	250	897	1125	192	500			572		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	673	1029	113	793	1032	192	376			572		
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 %	91	100	97	93	100	95	99			98		
cM capacity (veh/h)	301	216	874	252	215	818	1123			997		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	56	61	153	283	147	261	256
Volume Left	28	17	11	0	0	17	0
Volume Right	28	44	0	0	6	0	11
cSH	448	508	1123	1700	1700	997	1700
Volume to Capacity	0.12	0.12	0.01	0.17	0.09	0.02	0.15
Queue Length 95th (ft)	11	10	1	0	0	1	0
Control Delay (s)	14.2	13.1	0.7	0.0	0.0	0.7	0.0
Lane LOS	B	B	A			A	
Approach Delay (s)	14.2	13.1	0.2			0.4	
Approach LOS	B	B					

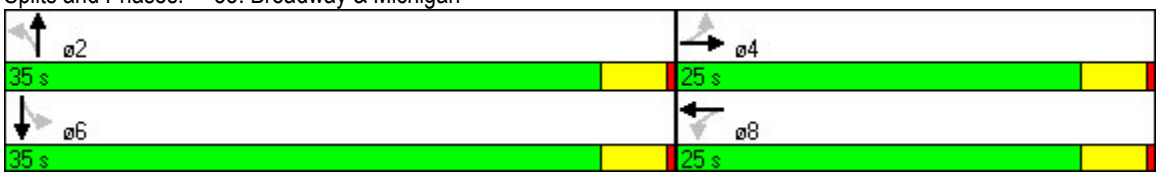
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	185	20	20	110	20	10	400	25	40	225	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.987			0.980			0.991			0.980	
Flt Protected		0.996			0.993			0.999			0.994	
Satd. Flow (prot)	0	3380	0	0	3283	0	0	3504	0	0	3381	0
Flt Permitted		0.927			0.906			0.947			0.865	
Satd. Flow (perm)	0	3146	0	0	2996	0	0	3321	0	0	2942	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			22			15			41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		260			919			684			808	
Travel Time (s)		5.9			20.9			15.5			18.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	22	206	22	22	122	22	11	444	28	44	250	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	250	0	0	166	0	0	483	0	0	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.22			0.16			0.28			0.22	
Control Delay		13.4			12.1			8.5			6.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.4			12.1			8.5			6.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		13.4			12.1			8.5			6.0	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 44.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 35: Broadway & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	250	166	483	338
v/c Ratio	0.22	0.16	0.28	0.22
Control Delay	13.4	12.1	8.5	6.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.4	12.1	8.5	6.0
Queue Length 50th (ft)	30	18	45	22
Queue Length 95th (ft)	53	36	71	35
Internal Link Dist (ft)	180	839	604	728
Turn Bay Length (ft)				
Base Capacity (vph)	1113	1063	1723	1540
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.16	0.28	0.22

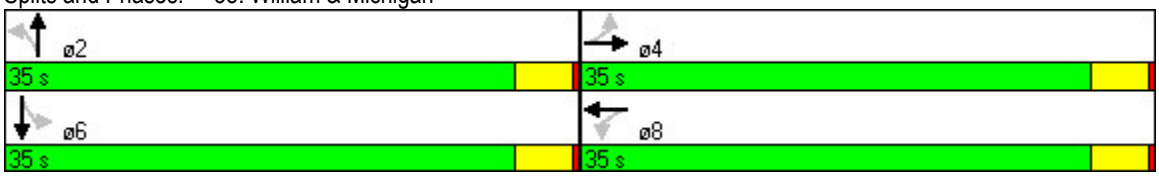
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	105	25	30	115	25	15	400	5	60	205	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.973			0.978			0.998			0.992	
Flt Protected		0.996			0.991			0.998			0.989	
Satd. Flow (prot)	0	3239	0	0	3240	0	0	3424	0	0	3373	0
Flt Permitted		0.938			0.898			0.940			0.798	
Satd. Flow (perm)	0	3051	0	0	2936	0	0	3225	0	0	2722	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			28			2			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		191			725			305			684	
Travel Time (s)		4.3			16.5			6.9			15.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	11	117	28	33	128	28	17	444	6	67	228	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	0	0	189	0	0	467	0	0	312	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		31.0			31.0			31.0			31.0	
Actuated g/C Ratio		0.44			0.44			0.44			0.44	
v/c Ratio		0.11			0.14			0.33			0.26	
Control Delay		9.6			10.2			13.5			12.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.6			10.2			13.5			12.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			B			B			B	
Approach Delay		9.6			10.2			13.5			12.5	
Approach LOS		A			B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 41.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 38: William & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	156	189	467	312
v/c Ratio	0.11	0.14	0.33	0.26
Control Delay	9.6	10.2	13.5	12.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.6	10.2	13.5	12.5
Queue Length 50th (ft)	16	20	65	41
Queue Length 95th (ft)	32	38	97	66
Internal Link Dist (ft)	111	645	225	604
Turn Bay Length (ft)				
Base Capacity (vph)	1367	1316	1429	1212
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.11	0.14	0.33	0.26

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	0	3539	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	263		290			305
Travel Time (s)	6.0		6.6			6.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type						
Protected Phases			2			6
Permitted Phases						
Minimum Split (s)			20.0			20.0
Total Split (s)	0.0	0.0	20.0	0.0	0.0	20.0
Total Split (%)	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Maximum Green (s)			16.0			16.0
Yellow Time (s)			3.5			3.5
All-Red Time (s)			0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)			5.0			5.0
Flash Dont Walk (s)			11.0			11.0
Pedestrian Calls (#/hr)			0			0
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay						
Approach LOS						

Intersection Summary			
Area Type:	Other		
Cycle Length: 20			
Actuated Cycle Length: 20			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 40			
Control Type: Pretimed			
Maximum v/c Ratio: 0.00			
Intersection Signal Delay: 0.0		Intersection LOS: A	
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 42: slip ramp & Michigan

Lane Group
Lane Group Flow (vph)
v/c Ratio
Control Delay
Queue Delay
Total Delay
Queue Length 50th (ft)
Queue Length 95th (ft)
Internal Link Dist (ft)
Turn Bay Length (ft)
Base Capacity (vph)
Starvation Cap Reductn
Spillback Cap Reductn
Storage Cap Reductn
Reduced v/c Ratio

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	5	25	0	30	5	660	35	15	525	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.955			0.927			0.992				
Flt Protected		0.984			0.978						0.999	
Satd. Flow (prot)	0	1750	0	0	1689	0	0	5045	0	0	3468	0
Flt Permitted		0.928			0.844			0.937			0.929	
Satd. Flow (perm)	0	1651	0	0	1457	0	0	4727	0	0	3225	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			33			20				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		738			789			698			650	
Travel Time (s)		16.8			17.9			15.9			14.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	6	6	6	28	0	33	6	733	39	17	583	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	61	0	0	778	0	0	600	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.2			7.2			64.6			64.6	
Actuated g/C Ratio		0.10			0.10			0.87			0.87	
v/c Ratio		0.11			0.36			0.19			0.21	
Control Delay		25.6			23.7			1.6			1.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		25.6			23.7			1.6			1.8	
LOS		C			C			A			A	
Approach Delay		25.6			23.7			1.6			1.8	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 74.1
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 2.9 — Intersection LOS: A
Intersection Capacity Utilization 36.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 47: Enterprise & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	18	61	778	600
v/c Ratio	0.11	0.36	0.19	0.21
Control Delay	25.6	23.7	1.6	1.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	25.6	23.7	1.6	1.8
Queue Length 50th (ft)	6	14	20	24
Queue Length 95th (ft)	22	44	36	45
Internal Link Dist (ft)	658	709	618	570
Turn Bay Length (ft)				
Base Capacity (vph)	474	438	4125	2812
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.14	0.19	0.21

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	65	60	35	85	30	65	605	50	20	490	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.961			0.973			0.990			0.979	
Flt Protected		0.980			0.988			0.996			0.998	
Satd. Flow (prot)	0	1721	0	0	1660	0	0	5014	0	0	3327	0
Flt Permitted		0.747			0.874			0.833			0.919	
Satd. Flow (perm)	0	1311	0	0	1469	0	0	4194	0	0	3064	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			15			29			46	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1128			954			650			1602	
Travel Time (s)		25.6			21.7			14.8			36.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	4%	4%	10%	10%	10%	2%	2%	2%	6%	6%	6%
Adj. Flow (vph)	94	72	67	39	94	33	72	672	56	22	544	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	233	0	0	166	0	0	800	0	0	660	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		15.9			15.9			52.2			52.2	
Actuated g/C Ratio		0.21			0.21			0.69			0.69	
v/c Ratio		0.80			0.52			0.28			0.31	
Control Delay		45.0			29.8			5.2			5.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		45.0			29.8			5.2			5.4	
LOS		D			C			A			A	
Approach Delay		45.0			29.8			5.2			5.4	
Approach LOS		D			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 76.1
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 12.5 — Intersection LOS: B
Intersection Capacity Utilization 59.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 50: Utica & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	233	166	800	660
v/c Ratio	0.80	0.52	0.28	0.31
Control Delay	45.0	29.8	5.2	5.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	45.0	29.8	5.2	5.4
Queue Length 50th (ft)	92	62	44	51
Queue Length 95th (ft)	169	118	73	92
Internal Link Dist (ft)	1048	874	570	1522
Turn Bay Length (ft)				
Base Capacity (vph)	380	417	2888	2117
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.40	0.28	0.31

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	115	55	80	125	10	65	610	55	15	435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.966			0.993			0.989			0.981	
Flt Protected		0.985			0.982			0.996			0.999	
Satd. Flow (prot)	0	3271	0	0	3259	0	0	4961	0	0	3402	0
Flt Permitted		0.791			0.758			0.856			0.929	
Satd. Flow (perm)	0	2627	0	0	2516	0	0	4263	0	0	3163	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			8			39			47	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			1227			1602			285	
Travel Time (s)		24.5			27.9			36.4			6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	3%	3%	3%	4%	4%	4%
Adj. Flow (vph)	83	128	61	89	139	11	72	678	61	17	483	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	272	0	0	239	0	0	811	0	0	572	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.2			10.2			36.6			36.6	
Actuated g/C Ratio		0.19			0.19			0.67			0.67	
v/c Ratio		0.50			0.50			0.28			0.27	
Control Delay		18.5			22.9			4.1			4.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		18.5			22.9			4.1			4.1	
LOS		B			C			A			A	
Approach Delay		18.5			22.9			4.1			4.1	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 54.8
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 8.6 — Intersection LOS: A
Intersection Capacity Utilization 55.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 53: Ferry & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	272	239	811	572
v/c Ratio	0.50	0.50	0.28	0.27
Control Delay	18.5	22.9	4.1	4.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.5	22.9	4.1	4.1
Queue Length 50th (ft)	32	35	29	27
Queue Length 95th (ft)	61	63	54	56
Internal Link Dist (ft)	1000	1147	1522	205
Turn Bay Length (ft)				
Base Capacity (vph)	811	741	2859	2128
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.34	0.32	0.28	0.27

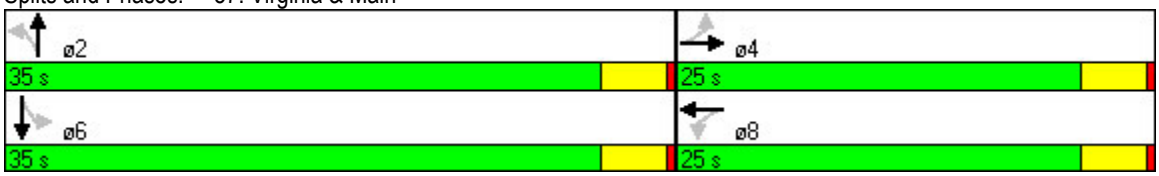
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	50	45	5	40	5	40	230	20	40	320	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.957			0.986			0.990			0.982	
Flt Protected		0.984			0.995			0.993			0.995	
Satd. Flow (prot)	0	1754	0	0	1827	0	0	4999	0	0	3458	0
Flt Permitted		0.907			0.977			0.860			0.900	
Satd. Flow (perm)	0	1617	0	0	1794	0	0	4330	0	0	3128	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			6			22			38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		390			155			695			565	
Travel Time (s)		8.9			3.5			15.8			12.8	
Peak Hour Factor	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)	50	56	50	6	44	6	44	256	22	44	356	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	0	0	56	0	0	322	0	0	456	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.26			0.09			0.14			0.28	
Control Delay		11.5			12.6			7.2			8.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.5			12.6			7.2			8.0	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.5			12.6			7.2			8.0	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 41.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 57: Virginia & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	156	56	322	456
v/c Ratio	0.26	0.09	0.14	0.28
Control Delay	11.5	12.6	7.2	8.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.5	12.6	7.2	8.0
Queue Length 50th (ft)	28	12	19	40
Queue Length 95th (ft)	65	32	31	64
Internal Link Dist (ft)	310	75	615	485
Turn Bay Length (ft)				
Base Capacity (vph)	595	632	2248	1635
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.09	0.14	0.28

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	0	125	15	0	20	40	235	20	10	280	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.919			0.924			0.991			0.982	
Flt Protected		0.980			0.979			0.993			0.999	
Satd. Flow (prot)	0	1678	0	0	1685	0	0	1833	0	0	1827	0
Flt Permitted		0.980			0.979			0.993			0.999	
Satd. Flow (perm)	0	1678	0	0	1685	0	0	1833	0	0	1827	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		251			192			363			330	
Travel Time (s)		5.7			4.4			8.3			7.5	
Peak Hour Factor	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)	94	0	139	17	0	22	44	261	22	11	311	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	233	0	0	39	0	0	327	0	0	372	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 54.9%	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)	85	0	125	15	0	20	40	235	20	10	280	45
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	0	139	17	0	22	44	261	22	11	311	50
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								363			330	
pX, platoon unblocked												
vC, conflicting volume	742	731	336	858	744	272	361			283		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	742	731	336	858	744	272	361			283		
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 %	70	100	80	92	100	97	96			99		
cM capacity (veh/h)	311	333	706	215	327	766	1198			1279		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	233	39	328	372
Volume Left	94	17	44	11
Volume Right	139	22	22	50
cSH	466	365	1198	1279
Volume to Capacity	0.50	0.11	0.04	0.01
Queue Length 95th (ft)	69	9	3	1
Control Delay (s)	20.2	16.0	1.4	0.3
Lane LOS	C	C	A	A
Approach Delay (s)	20.2	16.0	1.4	0.3
Approach LOS	C	C		

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	10	5	410	880	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.947				0.999	
Flt Protected	0.971			0.999		
Satd. Flow (prot)	1713	0	0	1861	1861	0
Flt Permitted	0.971			0.999		
Satd. Flow (perm)	1713	0	0	1861	1861	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	333			295	363	
Travel Time (s)	7.6			6.7	8.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	11	6	456	978	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	462	984	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.6%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	10	5	410	880	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	11	6	456	978	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					363	
pX, platoon unblocked	0.56	0.56	0.56			
vC, conflicting volume	1447	981	983			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1406	573	578			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	80	96	99			
cM capacity (veh/h)	85	291	558			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	461	983
Volume Left	17	6	0
Volume Right	11	0	6
cSH	119	558	1700
Volume to Capacity	0.23	0.01	0.58
Queue Length 95th (ft)	21	1	0
Control Delay (s)	44.4	0.3	0.0
Lane LOS	E	A	
Approach Delay (s)	44.4	0.3	0.0
Approach LOS	E		

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	10	10	5	10	5	15	65	15	5	75	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.947			0.965			0.978			0.991	
Flt Protected		0.989			0.987			0.992			0.997	
Satd. Flow (prot)	0	1745	0	0	1774	0	0	1807	0	0	3497	0
Flt Permitted		0.989			0.987			0.992			0.997	
Satd. Flow (perm)	0	1745	0	0	1774	0	0	1807	0	0	3497	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			333			290			355	
Travel Time (s)		6.5			7.6			6.6			8.1	
Peak Hour Factor	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)	6	11	11	6	11	6	17	72	17	6	83	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	0	0	23	0	0	106	0	0	95	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 21.8%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	10	10	5	10	5	15	65	15	5	75	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	11	11	6	11	6	17	72	17	6	83	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	28	22	106	47	47
Volume Left (vph)	6	6	17	6	0
Volume Right (vph)	11	6	17	0	6
Hadj (s)	-0.17	-0.07	-0.03	0.09	-0.05
Departure Headway (s)	4.2	4.3	4.2	4.8	4.6
Degree Utilization, x	0.03	0.03	0.12	0.06	0.06
Capacity (veh/h)	814	794	839	731	757
Control Delay (s)	7.3	7.4	7.8	6.9	6.7
Approach Delay (s)	7.3	7.4	7.8	6.8	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	7.3		
HCM Level of Service	A		
Intersection Capacity Utilization	21.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	60	145	145	30	85	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.977		0.912	
Flt Protected		0.986			0.983	
Satd. Flow (prot)	0	1837	1820	0	1670	0
Flt Permitted		0.986			0.983	
Satd. Flow (perm)	0	1837	1820	0	1670	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		173	169		93	
Travel Time (s)		3.9	3.8		2.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	67	161	161	33	94	178
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	228	194	0	272	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 45.0%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	60	145	145	30	85	160
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)	67	161	161	33	94	178
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		466	169			
pX, platoon unblocked	0.97				0.97	0.97
vC, conflicting volume	194				472	178
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	154				441	137
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				82	80
cM capacity (veh/h)	1384				530	884

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	228	194	272
Volume Left	67	0	94
Volume Right	0	33	178
cSH	1384	1700	718
Volume to Capacity	0.05	0.11	0.38
Queue Length 95th (ft)	4	0	44
Control Delay (s)	2.6	0.0	13.0
Lane LOS	A		B
Approach Delay (s)	2.6	0.0	13.0
Approach LOS			B

Intersection Summary			
Average Delay	6.0		
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	0	0	0	920	365	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	6408	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	6408	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	339			382	585	
Travel Time (s)	7.7			8.7	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	1022	406	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1022	406	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	920	365	0
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)	0	0	0	1022	406	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)	339			382		
pX, platoon unblocked					0.99	
vC, conflicting volume			0		256	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		168	0
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		49	100
cM capacity (veh/h)			1622		794	1084

Direction, Lane #	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	256	256	256	256	203	203
Volume Left	0	0	0	0	203	203
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	794	794
Volume to Capacity	0.15	0.15	0.15	0.15	0.26	0.26
Queue Length 95th (ft)	0	0	0	0	25	25
Control Delay (s)	0.0	0.0	0.0	0.0	11.1	11.1
Lane LOS					B	B
Approach Delay (s)	0.0				11.1	
Approach LOS					B	

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	185	1030	25	0	0	0	0	610	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997						0.999	
Flt Protected					0.993							
Satd. Flow (prot)	0	0	0	0	6344	0	0	0	0	0	1861	0
Flt Permitted					0.993							
Satd. Flow (perm)	0	0	0	0	6344	0	0	0	0	0	1861	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					68						1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	206	1144	28	0	0	0	0	678	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1378	0	0	0	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.4	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.5	50.5						25.6	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.2	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.4	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					51.5						26.6	
Actuated g/C Ratio					0.61						0.31	
v/c Ratio					0.36						1.17	
Control Delay					8.2						123.3	
Queue Delay					0.0						0.0	
Total Delay					8.2						123.3	
LOS					A						F	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					8.2						123.3	
Approach LOS					A						F	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 46.4	Intersection LOS: D
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 66: Goodell & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	1378	684
v/c Ratio	0.36	1.17
Control Delay	8.2	123.3
Queue Delay	0.0	0.0
Total Delay	8.2	123.3
Queue Length 50th (ft)	92	~446
Queue Length 95th (ft)	112	m#603
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3871	583
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.36	1.17

Intersection Summary

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

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

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

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	90	685	250	155	95	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.881				0.960	
Flt Protected	0.994			0.970		
Satd. Flow (prot)	1631	0	0	1807	1788	0
Flt Permitted	0.994			0.970		
Satd. Flow (perm)	1631	0	0	1807	1788	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	100			184	182	
Travel Time (s)	2.3			4.2	4.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	100	761	278	172	106	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	861	0	0	450	150	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	90	685	250	155	95	40
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	100	761	278	172	106	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)				184		
pX, platoon unblocked	0.81					
vC, conflicting volume	856	128	150			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	705	128	150			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	62	17	81			
cM capacity (veh/h)	263	922	1431			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	861	450	150
Volume Left	100	278	0
Volume Right	761	0	44
cSH	714	1431	1700
Volume to Capacity	1.21	0.19	0.09
Queue Length 95th (ft)	734	18	0
Control Delay (s)	126.0	5.7	0.0
Lane LOS	F	A	
Approach Delay (s)	126.0	5.7	0.0
Approach LOS	F		

Intersection Summary			
Average Delay	76.0		
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	170	10	80	245	35	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.932	
Flt Protected				0.988	0.976	
Satd. Flow (prot)	1850	0	0	1840	1694	0
Flt Permitted				0.988	0.976	
Satd. Flow (perm)	1850	0	0	1840	1694	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	293			173	355	
Travel Time (s)	6.7			3.9	8.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	189	11	89	272	39	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	200	0	0	361	78	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	170	10	80	245	35	35
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)	189	11	89	272	39	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	293			342		
pX, platoon unblocked						
vC, conflicting volume			200		644	194
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			200		644	194
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		90	95
cM capacity (veh/h)			1372		409	847

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	200	361	78
Volume Left	0	89	39
Volume Right	11	0	39
cSH	1700	1372	551
Volume to Capacity	0.12	0.06	0.14
Queue Length 95th (ft)	0	5	12
Control Delay (s)	0.0	2.4	12.6
Lane LOS		A	B
Approach Delay (s)	0.0	2.4	12.6
Approach LOS			B

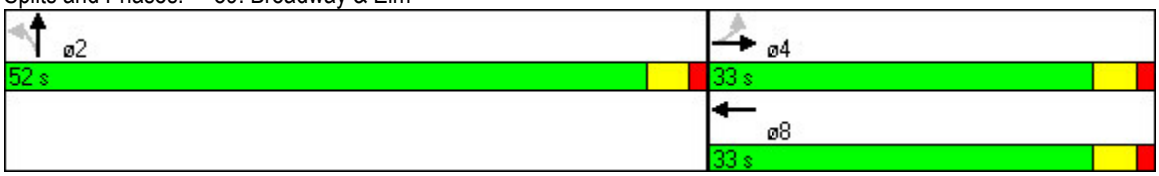
Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	145	0	0	85	25	15	1365	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.966			0.996				
Flt Protected		0.976						0.999				
Satd. Flow (prot)	0	3454	0	0	3419	0	0	5060	0	0	0	0
Flt Permitted		0.758						0.999				
Satd. Flow (perm)	0	2683	0	0	3419	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					28			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			219			461			734	
Travel Time (s)		9.5			5.0			10.5			16.7	
Peak Hour Factor	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)	156	161	0	0	94	28	17	1517	39	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	317	0	0	122	0	0	1573	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	23.0	23.0			23.0		41.0	41.0				
Total Split (s)	33.0	33.0	0.0	0.0	33.0	0.0	52.0	52.0	0.0	0.0	0.0	0.0
Total Split (%)	38.8%	38.8%	0.0%	0.0%	38.8%	0.0%	61.2%	61.2%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	28.3	28.3			28.3		47.3	47.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			48.3				
Actuated g/C Ratio		0.34			0.34			0.57				
v/c Ratio		0.34			0.10			0.55				
Control Delay		8.0			14.8			4.3				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.0			14.8			4.3				
LOS		A			B			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.0			14.8			4.3				
Approach LOS		A			B			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 40 (47%), Referenced to phase 2:NBTL and 6:, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 48.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 89: Broadway & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	317	122	1573
v/c Ratio	0.34	0.10	0.55
Control Delay	8.0	14.8	4.3
Queue Delay	0.0	0.0	0.0
Total Delay	8.0	14.8	4.3
Queue Length 50th (ft)	19	17	49
Queue Length 95th (ft)	m26	36	52
Internal Link Dist (ft)	339	139	381
Turn Bay Length (ft)			
Base Capacity (vph)	925	1197	2878
Starvation Cap Reductn	0	0	153
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.34	0.10	0.58

Intersection Summary

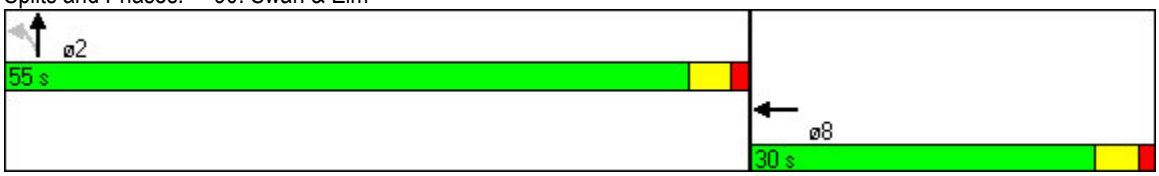
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	250	90	95	635	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.91	1.00	1.00	1.00
Frt					0.968			0.996				
Flt Protected							0.950	0.999				
Satd. Flow (prot)	0	0	0	0	1839	0	1552	4878	0	0	0	0
Flt Permitted							0.950	0.999				
Satd. Flow (perm)	0	0	0	0	1839	0	1552	4878	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					20		112	14				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			208			801			316	
Travel Time (s)		8.2			4.7			18.2			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.71	0.81	0.76	0.81	0.88	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	0	0	352	111	125	784	23	0	0	0
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	0	0	0	0	463	0	112	820	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					21.2		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		50.4	50.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					20		22	22				
Act Effct Green (s)					27.4		52.4	52.4				
Actuated g/C Ratio					0.32		0.62	0.62				
v/c Ratio					0.76		0.11	0.27				
Control Delay					34.6		1.7	7.7				
Queue Delay					0.0		0.0	0.0				
Total Delay					34.6		1.7	7.7				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					C		A	A				
Approach Delay					34.6			6.9				
Approach LOS					C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 90: Swan & Elm



Lane Group	WBT	NBL	NBT
Lane Group Flow (vph)	463	112	820
v/c Ratio	0.76	0.11	0.27
Control Delay	34.6	1.7	7.7
Queue Delay	0.0	0.0	0.0
Total Delay	34.6	1.7	7.7
Queue Length 50th (ft)	211	0	68
Queue Length 95th (ft)	230	12	79
Internal Link Dist (ft)	128		721
Turn Bay Length (ft)			
Base Capacity (vph)	606	1000	3013
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.76	0.11	0.27

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	240	10	80	125	0	0	0	0	50	2005	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.994									0.993	
Flt Protected					0.981						0.999	
Satd. Flow (prot)	0	3518	0	0	3472	0	0	0	0	0	5045	0
Flt Permitted					0.749						0.999	
Satd. Flow (perm)	0	3518	0	0	2651	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5									16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			419			255			685	
Travel Time (s)		5.1			9.5			5.8			15.6	
Peak Hour Factor	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)	0	267	11	89	139	0	0	0	0	56	2228	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	278	0	0	228	0	0	0	0	0	2401	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		24.0		24.0	24.0					41.0	41.0	
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%
Maximum Green (s)		25.3		25.3	25.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		26.3			26.3						51.3	
Actuated g/C Ratio		0.31			0.31						0.60	
v/c Ratio		0.25			0.28						0.79	
Control Delay		22.4			19.3						6.1	
Queue Delay		0.0			0.0						0.0	
Total Delay		22.4			19.3						6.1	
LOS		C			B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.4			19.3						6.1	
Approach LOS		C			B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 33 (39%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 64.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 91: Broadway & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	278	228	2401
v/c Ratio	0.25	0.28	0.79
Control Delay	22.4	19.3	6.1
Queue Delay	0.0	0.0	0.0
Total Delay	22.4	19.3	6.1
Queue Length 50th (ft)	56	37	47
Queue Length 95th (ft)	88	57	53
Internal Link Dist (ft)	146	339	605
Turn Bay Length (ft)			
Base Capacity (vph)	1092	820	3051
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.25	0.28	0.79

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	425	195	165	0	0	0	0	0	2220	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.86	0.86
Frt			0.850								0.992	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	2787	1770	3539	0	0	0	0	0	6357	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			10	6							26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			359			115			332	
Travel Time (s)		8.0			8.2			2.6			7.5	
Peak Hour Factor	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)	0	0	472	217	183	0	0	0	0	0	2467	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	472	217	183	0	0	0	0	0	2600	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			custom	Perm								
Protected Phases					8						6	
Permitted Phases			4	8								
Minimum Split (s)			20.8	20.8	20.8						50.0	
Total Split (s)	0.0	0.0	26.0	26.0	26.0	0.0	0.0	0.0	0.0	0.0	59.0	0.0
Total Split (%)	0.0%	0.0%	30.6%	30.6%	30.6%	0.0%	0.0%	0.0%	0.0%	0.0%	69.4%	0.0%
Maximum Green (s)			21.2	21.2	21.2						54.2	
Yellow Time (s)			3.2	3.2	3.2						3.2	
All-Red Time (s)			1.6	1.6	1.6						1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.8	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)			5.0	5.0	5.0						5.0	
Flash Dont Walk (s)			11.0	11.0	11.0						11.0	
Pedestrian Calls (#/hr)			0	0	0						0	
Act Effct Green (s)			22.2	22.2	22.2						55.2	
Actuated g/C Ratio			0.26	0.26	0.26						0.65	
v/c Ratio			0.64	0.46	0.20						0.63	
Control Delay			32.0	35.8	32.7						3.6	
Queue Delay			0.0	0.0	0.0						0.0	
Total Delay			32.0	35.8	32.7						3.7	
LOS			C	D	C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					34.4						3.7	
Approach LOS					C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 75 (88%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 11.1	Intersection LOS: B
Intersection Capacity Utilization 69.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 92: Swan & Oak

Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	472	217	183	2600
v/c Ratio	0.64	0.46	0.20	0.63
Control Delay	32.0	35.8	32.7	3.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	32.0	35.8	32.7	3.7
Queue Length 50th (ft)	124	81	36	73
Queue Length 95th (ft)	181	m129	m57	79
Internal Link Dist (ft)			279	252
Turn Bay Length (ft)				
Base Capacity (vph)	735	467	924	4137
Starvation Cap Reductn	0	0	0	135
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.64	0.46	0.20	0.65

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	115	150	60	70	0	0	0	0	15	1945	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.924									0.998	
Flt Protected					0.977							
Satd. Flow (prot)	0	1721	0	0	1820	0	0	0	0	0	5075	0
Flt Permitted					0.666							
Satd. Flow (perm)	0	1721	0	0	1241	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8									4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			458			685			413	
Travel Time (s)		10.0			10.4			15.6			9.4	
Peak Hour Factor	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)	0	128	167	67	78	0	0	0	0	17	2161	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	295	0	0	145	0	0	0	0	0	2206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%
Maximum Green (s)		25.3		25.3	25.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		26.3			26.3						51.3	
Actuated g/C Ratio		0.31			0.31						0.60	
v/c Ratio		0.55			0.38						0.72	
Control Delay		28.3			26.1						4.4	
Queue Delay		0.0			0.0						0.0	
Total Delay		28.3			26.1						4.4	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		28.3			26.1						4.4	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 18 (21%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 93: Huron & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	295	145	2206
v/c Ratio	0.55	0.38	0.72
Control Delay	28.3	26.1	4.4
Queue Delay	0.0	0.0	0.0
Total Delay	28.3	26.1	4.4
Queue Length 50th (ft)	127	67	32
Queue Length 95th (ft)	206	124	35
Internal Link Dist (ft)	360	378	333
Turn Bay Length (ft)			
Base Capacity (vph)	538	384	3064
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.55	0.38	0.72

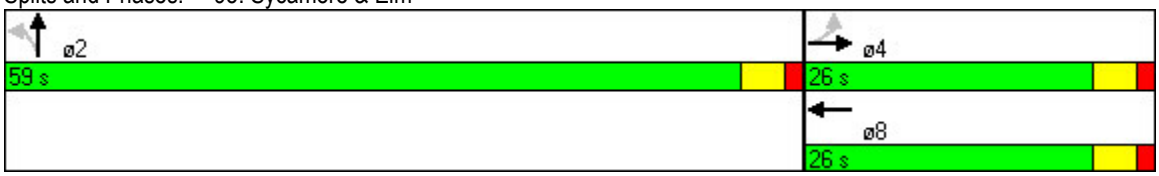
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	60	0	0	55	15	35	1470	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.971			0.998				
Flt Protected		0.969						0.999				
Satd. Flow (prot)	0	1805	0	0	1809	0	0	5070	0	0	0	0
Flt Permitted		0.766						0.999				
Satd. Flow (perm)	0	1427	0	0	1809	0	0	5070	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					16			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		458			219			734			396	
Travel Time (s)		10.4			5.0			16.7			9.0	
Peak Hour Factor	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)	117	67	0	0	61	17	39	1633	28	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	184	0	0	78	0	0	1700	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.7	20.7			20.7		45.0	45.0				
Total Split (s)	26.0	26.0	0.0	0.0	26.0	0.0	59.0	59.0	0.0	0.0	0.0	0.0
Total Split (%)	30.6%	30.6%	0.0%	0.0%	30.6%	0.0%	69.4%	69.4%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	21.3	21.3			21.3		54.3	54.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		22.3			22.3			55.3				
Actuated g/C Ratio		0.26			0.26			0.65				
v/c Ratio		0.49			0.16			0.51				
Control Delay		51.3			20.9			19.7				
Queue Delay		0.0			0.0			0.0				
Total Delay		51.3			20.9			19.7				
LOS		D			C			B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		51.3			20.9			19.7				
Approach LOS		D			C			B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 22.7	Intersection LOS: C
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 95: Sycamore & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	184	78	1700
v/c Ratio	0.49	0.16	0.51
Control Delay	51.3	20.9	19.7
Queue Delay	0.0	0.0	0.0
Total Delay	51.3	20.9	19.7
Queue Length 50th (ft)	102	25	324
Queue Length 95th (ft)	m166	60	371
Internal Link Dist (ft)	378	139	654
Turn Bay Length (ft)			
Base Capacity (vph)	374	486	3301
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.49	0.16	0.51

Intersection Summary

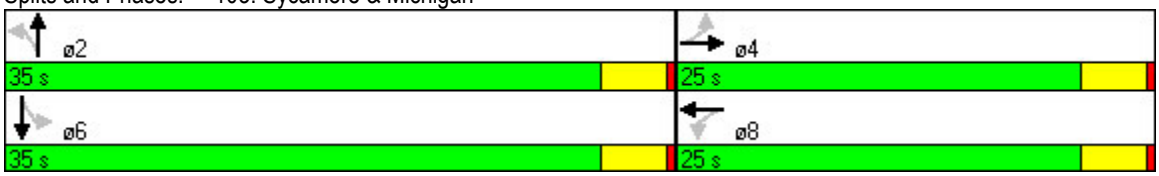
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	60	10	15	55	25	5	430	20	15	245	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.982			0.964			0.993			0.994	
Flt Protected		0.996			0.992			0.999			0.997	
Satd. Flow (prot)	0	1659	0	0	1652	0	0	3511	0	0	3440	0
Flt Permitted		0.986			0.962			0.952			0.925	
Satd. Flow (perm)	0	1643	0	0	1602	0	0	3346	0	0	3192	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			28			11			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		266			667			808			873	
Travel Time (s)		6.0			15.2			18.4			19.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	12%	12%	12%	10%	10%	10%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	6	67	11	17	61	28	6	478	22	17	272	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	106	0	0	506	0	0	300	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.14			0.18			0.29			0.18	
Control Delay		12.8			11.5			6.9			7.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.8			11.5			6.9			7.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		12.8			11.5			6.9			7.9	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 34.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: Sycamore & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	84	106	506	300
v/c Ratio	0.14	0.18	0.29	0.18
Control Delay	12.8	11.5	6.9	7.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.8	11.5	6.9	7.9
Queue Length 50th (ft)	18	19	37	26
Queue Length 95th (ft)	44	48	53	45
Internal Link Dist (ft)	186	587	728	793
Turn Bay Length (ft)				
Base Capacity (vph)	582	579	1734	1654
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.14	0.18	0.29	0.18

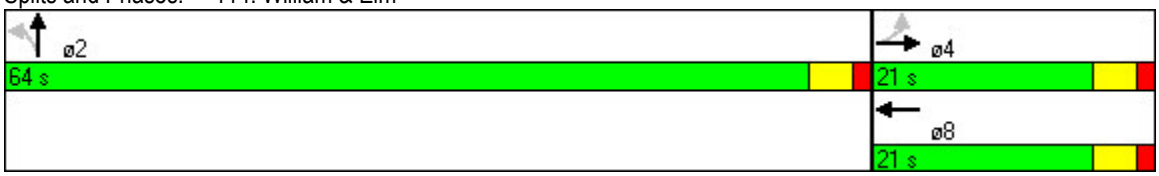
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	190	0	0	85	25	25	1420	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.966			0.998				
Flt Protected		0.992						0.999				
Satd. Flow (prot)	0	3511	0	0	3419	0	0	5070	0	0	0	0
Flt Permitted		0.892						0.999				
Satd. Flow (perm)	0	3157	0	0	3419	0	0	5070	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					28			4				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		371			191			308			461	
Travel Time (s)		8.4			4.3			7.0			10.5	
Peak Hour Factor	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)	39	211	0	0	94	28	28	1578	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	250	0	0	122	0	0	1623	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	21.0	21.0	0.0	0.0	21.0	0.0	64.0	64.0	0.0	0.0	0.0	0.0
Total Split (%)	24.7%	24.7%	0.0%	0.0%	24.7%	0.0%	75.3%	75.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.3	16.3			16.3		59.3	59.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.3			17.3			60.3				
Actuated g/C Ratio		0.20			0.20			0.71				
v/c Ratio		0.39			0.17			0.45				
Control Delay		28.0			22.1			3.8				
Queue Delay		0.0			0.0			0.1				
Total Delay		28.0			22.1			3.9				
LOS		C			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		28.0			22.1			3.9				
Approach LOS		C			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 39 (46%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 8.0	Intersection LOS: A
Intersection Capacity Utilization 44.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 114: William & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	250	122	1623
v/c Ratio	0.39	0.17	0.45
Control Delay	28.0	22.1	3.8
Queue Delay	0.0	0.0	0.1
Total Delay	28.0	22.1	3.9
Queue Length 50th (ft)	51	21	31
Queue Length 95th (ft)	m77	44	39
Internal Link Dist (ft)	291	111	228
Turn Bay Length (ft)			
Base Capacity (vph)	643	718	3598
Starvation Cap Reductn	0	0	720
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.39	0.17	0.56

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	55	45	80	115	0	0	0	0	45	2060	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.932									0.999	
Flt Protected					0.980						0.999	
Satd. Flow (prot)	0	3299	0	0	3468	0	0	0	0	0	5075	0
Flt Permitted					0.797						0.999	
Satd. Flow (perm)	0	3299	0	0	2821	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		507			371			297			255	
Travel Time (s)		11.5			8.4			6.8			5.8	
Peak Hour Factor	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)	0	61	50	89	128	0	0	0	0	50	2289	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	217	0	0	0	0	0	2350	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	26.0	0.0	26.0	26.0	0.0	0.0	0.0	0.0	59.0	59.0	0.0
Total Split (%)	0.0%	30.6%	0.0%	30.6%	30.6%	0.0%	0.0%	0.0%	0.0%	69.4%	69.4%	0.0%
Maximum Green (s)		21.3		21.3	21.3					54.3	54.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		22.3			22.3						55.3	
Actuated g/C Ratio		0.26			0.26						0.65	
v/c Ratio		0.13			0.29						0.71	
Control Delay		22.5			21.3						1.8	
Queue Delay		0.0			0.0						0.2	
Total Delay		22.5			21.3						2.0	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.5			21.3						2.0	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 37 (44%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 4.4	Intersection LOS: A
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 115: William & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	111	217	2350
v/c Ratio	0.13	0.29	0.71
Control Delay	22.5	21.3	1.8
Queue Delay	0.0	0.0	0.2
Total Delay	22.5	21.3	2.0
Queue Length 50th (ft)	22	36	21
Queue Length 95th (ft)	42	55	23
Internal Link Dist (ft)	427	291	175
Turn Bay Length (ft)			
Base Capacity (vph)	872	740	3302
Starvation Cap Reductn	0	0	291
Spillback Cap Reductn	0	0	273
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.13	0.29	0.78

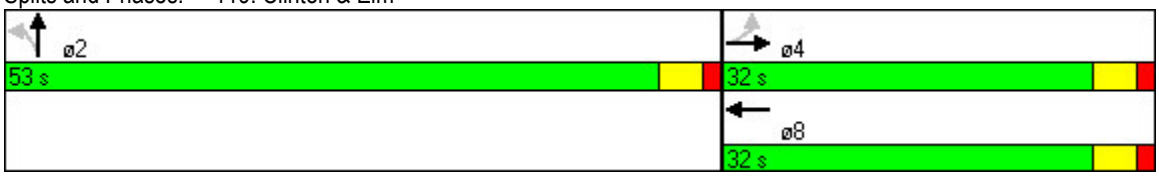
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	135	0	0	40	20	20	1300	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.946			0.998				
Flt Protected		0.973						0.999				
Satd. Flow (prot)	0	1824	0	0	1797	0	0	5026	0	0	0	0
Flt Permitted		0.770						0.999				
Satd. Flow (perm)	0	1444	0	0	1797	0	0	5026	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					37			3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			191			734			308	
Travel Time (s)		8.2			4.3			16.7			7.0	
Peak Hour Factor	0.68	0.78	0.90	0.90	0.73	0.54	0.58	0.94	0.58	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	2%	2%	0%	0%	0%	3%	0%	2%	2%	2%
Adj. Flow (vph)	213	173	0	0	55	37	34	1383	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	386	0	0	92	0	0	1434	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.2	21.2			21.2		48.0	48.0				
Total Split (s)	32.0	32.0	0.0	0.0	32.0	0.0	53.0	53.0	0.0	0.0	0.0	0.0
Total Split (%)	37.6%	37.6%	0.0%	0.0%	37.6%	0.0%	62.4%	62.4%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	27.3	27.3			27.3		48.3	48.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.7	2.7	3.0	3.0	2.7	3.0	2.7	2.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			50.3				
Actuated g/C Ratio		0.34			0.34			0.59				
v/c Ratio		0.78			0.14			0.48				
Control Delay		45.1			13.1			5.4				
Queue Delay		0.3			0.0			0.0				
Total Delay		45.4			13.1			5.5				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D			B			A				
Approach Delay		45.4			13.1			5.5				
Approach LOS		D			B			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 31 (36%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 119: Clinton & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	386	92	1434
v/c Ratio	0.78	0.14	0.48
Control Delay	45.1	13.1	5.4
Queue Delay	0.3	0.0	0.0
Total Delay	45.4	13.1	5.5
Queue Length 50th (ft)	180	20	17
Queue Length 95th (ft)	232	39	27
Internal Link Dist (ft)	279	111	654
Turn Bay Length (ft)			
Base Capacity (vph)	498	644	2975
Starvation Cap Reductn	8	0	0
Spillback Cap Reductn	0	1	169
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.79	0.14	0.51

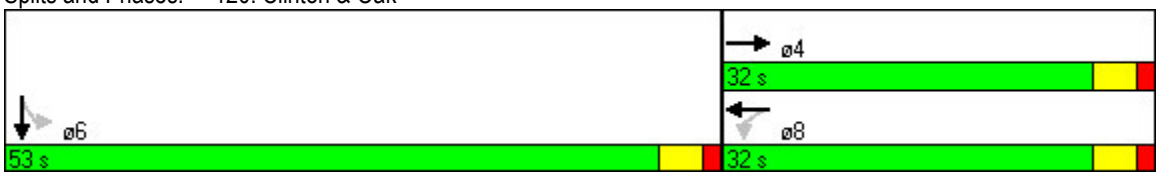
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	215	185	25	40	0	0	0	0	40	2125	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.938									0.999	
Flt Protected					0.981						0.999	
Satd. Flow (prot)	0	1747	0	0	1827	0	0	0	0	0	5075	0
Flt Permitted					0.691						0.999	
Satd. Flow (perm)	0	1747	0	0	1287	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		520			359			762			297	
Travel Time (s)		11.8			8.2			17.3			6.8	
Peak Hour Factor	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)	0	239	206	28	44	0	0	0	0	44	2361	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	445	0	0	72	0	0	0	0	0	2422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					48.0	48.0	
Total Split (s)	0.0	32.0	0.0	32.0	32.0	0.0	0.0	0.0	0.0	53.0	53.0	0.0
Total Split (%)	0.0%	37.6%	0.0%	37.6%	37.6%	0.0%	0.0%	0.0%	0.0%	62.4%	62.4%	0.0%
Maximum Green (s)		27.3		27.3	27.3					48.3	48.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		28.3			28.3						49.3	
Actuated g/C Ratio		0.33			0.33						0.58	
v/c Ratio		0.76			0.17						0.82	
Control Delay		35.3			22.6						6.7	
Queue Delay		0.6			0.0						0.1	
Total Delay		35.9			22.6						6.8	
LOS		D			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.9			22.6						6.8	
Approach LOS		D			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 47 (55%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 120: Clinton & Oak



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	445	72	2422
v/c Ratio	0.76	0.17	0.82
Control Delay	35.3	22.6	6.7
Queue Delay	0.6	0.0	0.1
Total Delay	35.9	22.6	6.8
Queue Length 50th (ft)	208	31	31
Queue Length 95th (ft)	#350	69	34
Internal Link Dist (ft)	440	279	217
Turn Bay Length (ft)			
Base Capacity (vph)	584	428	2944
Starvation Cap Reductn	0	0	55
Spillback Cap Reductn	22	0	20
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.79	0.17	0.84

Intersection Summary

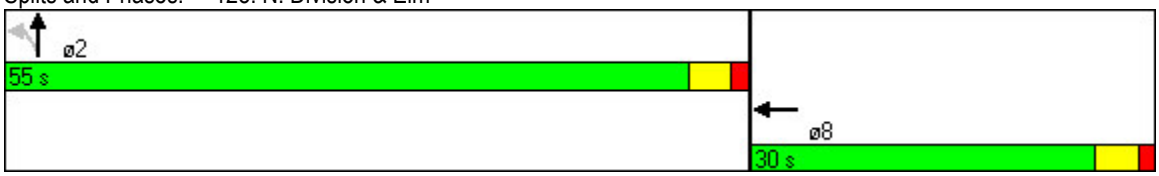
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	70	80	135	1215	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.920							
Flt Protected								0.995				
Satd. Flow (prot)	0	0	0	0	3256	0	0	5060	0	0	0	0
Flt Permitted								0.995				
Satd. Flow (perm)	0	0	0	0	3256	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					55			40				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		349			195			317			734	
Travel Time (s)		7.9			4.4			7.2			16.7	
Peak Hour Factor	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)	0	0	0	0	78	89	150	1350	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	167	0	0	1500	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					20.6		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		50.4	50.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					26.4			51.4				
Actuated g/C Ratio					0.31			0.60				
v/c Ratio					0.16			0.49				
Control Delay					14.6			12.9				
Queue Delay					0.0			0.3				
Total Delay					14.6			13.2				
LOS					B			B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					14.6			13.2				
Approach LOS					B			B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 10 (12%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 13.3	Intersection LOS: B
Intersection Capacity Utilization 37.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 128: N. Division & Elm



Lane Group	WBT	NBT
Lane Group Flow (vph)	167	1500
v/c Ratio	0.16	0.49
Control Delay	14.6	12.9
Queue Delay	0.0	0.3
Total Delay	14.6	13.2
Queue Length 50th (ft)	22	228
Queue Length 95th (ft)	45	272
Internal Link Dist (ft)	115	237
Turn Bay Length (ft)		
Base Capacity (vph)	1049	3076
Starvation Cap Reductn	0	750
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.16	0.64

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	65	75	0	0	0	0	0	2180	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.998	
Flt Protected					0.977							
Satd. Flow (prot)	0	0	0	0	4968	0	0	0	0	0	5075	0
Flt Permitted					0.977							
Satd. Flow (perm)	0	0	0	0	4968	0	0	0	0	0	5075	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					3						3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			349			277			762	
Travel Time (s)		8.2			7.9			6.3			17.3	
Peak Hour Factor	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)	0	0	0	72	83	0	0	0	0	0	2422	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	155	0	0	0	0	0	2450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.7	20.7						50.0	
Total Split (s)	0.0	0.0	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	52.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	38.8%	38.8%	0.0%	0.0%	0.0%	0.0%	0.0%	61.2%	0.0%
Maximum Green (s)				28.3	28.3						47.3	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.5	1.5						1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					29.3						48.3	
Actuated g/C Ratio					0.34						0.57	
v/c Ratio					0.09						0.85	
Control Delay					16.7						7.3	
Queue Delay					0.0						0.0	
Total Delay					16.7						7.3	
LOS					B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					16.7						7.3	
Approach LOS					B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 66 (78%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 129: N. Division & Oak

Lane Group	← WBT	↓ SBT
Lane Group Flow (vph)	155	2450
v/c Ratio	0.09	0.85
Control Delay	16.7	7.3
Queue Delay	0.0	0.0
Total Delay	16.7	7.3
Queue Length 50th (ft)	20	47
Queue Length 95th (ft)	33	52
Internal Link Dist (ft)	269	682
Turn Bay Length (ft)		
Base Capacity (vph)	1714	2885
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.09	0.85

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	545	165	0	0	0	0	0	760	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.998				
Flt Protected	0.950	0.970										
Satd. Flow (prot)	1610	3288	0	0	0	0	0	5075	0	0	0	0
Flt Permitted	0.950	0.970										
Satd. Flow (perm)	1610	3288	0	0	0	0	0	5075	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	168	168						4				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			206			316			317	
Travel Time (s)		7.8			4.7			7.2			7.2	
Peak Hour Factor	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)	606	183	0	0	0	0	0	844	11	0	0	0
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	303	486	0	0	0	0	0	855	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	21.0	21.0						50.0				
Total Split (s)	31.0	31.0	0.0	0.0	0.0	0.0	0.0	54.0	0.0	0.0	0.0	0.0
Total Split (%)	36.5%	36.5%	0.0%	0.0%	0.0%	0.0%	0.0%	63.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	26.4	26.4						49.4				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	1.4	1.4						1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	27.4	27.4						50.4				
Actuated g/C Ratio	0.32	0.32						0.59				
v/c Ratio	0.48	0.41						0.28				
Control Delay	10.2	7.9						4.0				
Queue Delay	0.7	0.0						0.1				
Total Delay	10.9	7.9						4.1				
LOS	B	A						A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.0						4.1				
Approach LOS		A						A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 5 (6%), Referenced to phase 2:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 83.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 135: S Division & Elm

Lane Group	EBL	EBT	NBT
Lane Group Flow (vph)	303	486	855
v/c Ratio	0.48	0.41	0.28
Control Delay	10.2	7.9	4.0
Queue Delay	0.7	0.0	0.1
Total Delay	10.9	7.9	4.1
Queue Length 50th (ft)	134	107	30
Queue Length 95th (ft)	221	154	35
Internal Link Dist (ft)		265	236
Turn Bay Length (ft)			
Base Capacity (vph)	633	1174	3011
Starvation Cap Reductn	121	0	971
Spillback Cap Reductn	6	3	177
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.59	0.42	0.42

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	620	395	0	0	0	0	0	0	90	1945	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									
Flt Protected											0.998	
Satd. Flow (prot)	0	5085	1583	0	0	0	0	0	0	0	6395	0
Flt Permitted											0.998	
Satd. Flow (perm)	0	5085	1583	0	0	0	0	0	0	0	6395	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			7								19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		208			345			332			277	
Travel Time (s)		4.7			7.8			7.5			6.3	
Peak Hour Factor	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)	0	689	439	0	0	0	0	0	0	100	2161	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	689	439	0	0	0	0	0	0	0	2261	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		20.8	20.8							50.0	50.0	
Total Split (s)	0.0	31.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	54.0	54.0	0.0
Total Split (%)	0.0%	36.5%	36.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	63.5%	63.5%	0.0%
Maximum Green (s)		26.2	26.2							49.2	49.2	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.6	1.6							1.6	1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.0	3.8	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		27.2	27.2								50.2	
Actuated g/C Ratio		0.32	0.32								0.59	
v/c Ratio		0.42	0.86								0.60	
Control Delay		23.7	45.3								1.2	
Queue Delay		0.0	0.0								0.4	
Total Delay		23.7	45.3								1.6	
LOS		C	D								A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		32.1									1.6	
Approach LOS		C									A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 72 (85%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 60.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 136: S Division & Oak

Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	689	439	2261
v/c Ratio	0.42	0.86	0.60
Control Delay	23.7	45.3	1.2
Queue Delay	0.0	0.0	0.4
Total Delay	23.7	45.3	1.6
Queue Length 50th (ft)	105	215	9
Queue Length 95th (ft)	138	#384	11
Internal Link Dist (ft)	128		197
Turn Bay Length (ft)			
Base Capacity (vph)	1627	511	3785
Starvation Cap Reductn	0	0	830
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.42	0.86	0.77

Intersection Summary

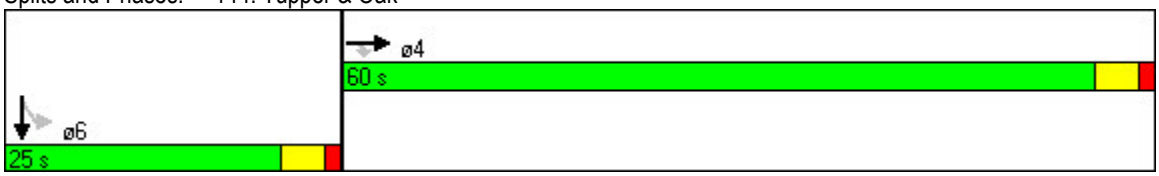
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1915	255	0	0	0	0	0	0	275	500	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									
Flt Protected											0.983	
Satd. Flow (prot)	0	3539	1583	0	0	0	0	0	0	0	3479	0
Flt Permitted											0.983	
Satd. Flow (perm)	0	3539	1583	0	0	0	0	0	0	0	3479	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			57								14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		351			380			611			685	
Travel Time (s)		8.0			8.6			13.9			15.6	
Peak Hour Factor	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)	0	2128	283	0	0	0	0	0	0	306	556	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	2128	283	0	0	0	0	0	0	0	862	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		45.0	45.0							20.6	20.6	
Total Split (s)	0.0	60.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0
Total Split (%)	0.0%	70.6%	70.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.4%	29.4%	0.0%
Maximum Green (s)		55.4	55.4							20.4	20.4	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.4	1.4							1.4	1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		56.4	56.4								21.4	
Actuated g/C Ratio		0.66	0.66								0.25	
v/c Ratio		0.91	0.26								0.97	
Control Delay		21.5	6.3								38.7	
Queue Delay		5.0	0.5								0.0	
Total Delay		26.5	6.8								38.7	
LOS		C	A								D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		24.2									38.7	
Approach LOS		C									D	

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 28.0	Intersection LOS: C
Intersection Capacity Utilization 81.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 144: Tupper & Oak



Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	2128	283	862
v/c Ratio	0.91	0.26	0.97
Control Delay	21.5	6.3	38.7
Queue Delay	5.0	0.5	0.0
Total Delay	26.5	6.8	38.7
Queue Length 50th (ft)	541	34	133
Queue Length 95th (ft)	m519	m67	m126
Internal Link Dist (ft)	271		605
Turn Bay Length (ft)			
Base Capacity (vph)	2348	1070	886
Starvation Cap Reductn	180	428	0
Spillback Cap Reductn	70	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.98	0.44	0.97

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	1240	10	0	0	0	0	160	195	495	185	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor		1.00										
Frt		0.998						0.960	0.850			
Flt Protected		0.999									0.968	
Satd. Flow (prot)	0	5156	0	0	0	0	0	1687	1504	0	2986	0
Flt Permitted		0.999									0.603	
Satd. Flow (perm)	0	5156	0	0	0	0	0	1687	1504	0	1860	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4						23	43			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	30	1476	20	0	0	0	0	182	291	717	370	0
Shared Lane Traffic (%)									23%			
Lane Group Flow (vph)	0	1526	0	0	0	0	0	249	224	0	1087	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	35.3%	35.3%	35.3%	0.0%
Maximum Green (s)	50.4	50.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		52.4						27.4	27.4		27.4	
Actuated g/C Ratio		0.62						0.32	0.32		0.32	
v/c Ratio		0.48						0.45	0.44		2.67dl	
Control Delay		5.0						23.6	21.3		395.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.3						0.0	0.0		0.0	
Total Delay		5.3						23.6	21.3		395.9	
LOS		A						C	C		F	
Approach Delay		5.3						22.6			395.9	
Approach LOS		A						C			F	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 38 (45%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 90	
Control Type: Pretimed	
Maximum v/c Ratio: 1.81	
Intersection Signal Delay: 145.5	Intersection LOS: F
Intersection Capacity Utilization 74.3%	ICU Level of Service D
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 145: Tupper & Ellicott

Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	1526	249	224	1087
v/c Ratio	0.48	0.45	0.44	2.67dl
Control Delay	5.0	23.6	21.3	395.9
Queue Delay	0.3	0.0	0.0	0.0
Total Delay	5.3	23.6	21.3	395.9
Queue Length 50th (ft)	51	98	77	~452
Queue Length 95th (ft)	59	165	94	#236
Internal Link Dist (ft)	262	271		652
Turn Bay Length (ft)				
Base Capacity (vph)	3180	559	514	600
Starvation Cap Reductn	411	0	0	0
Spillback Cap Reductn	838	3	7	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.65	0.45	0.44	1.81

Intersection Summary

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

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1185	75	0	0	0	0	150	85	155	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988							0.850			
Flt Protected		0.999								0.950		
Satd. Flow (prot)	0	5074	0	0	0	0	0	1900	1615	1787	1863	0
Flt Permitted		0.999								0.543		
Satd. Flow (perm)	0	5074	0	0	0	0	0	1900	1615	1021	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30							63			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			342			356			718	
Travel Time (s)		6.5			7.8			8.1			16.3	
Peak Hour Factor	0.50	0.90	0.67	0.90	0.90	0.90	0.90	0.80	0.94	0.76	0.73	0.90
Heavy Vehicles (%)	0%	1%	0%	2%	2%	2%	2%	0%	0%	1%	2%	2%
Adj. Flow (vph)	20	1317	112	0	0	0	0	188	90	204	274	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1449	0	0	0	0	0	188	90	204	274	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	35.3%	35.3%	35.3%	0.0%
Maximum Green (s)	50.4	50.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	3.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		52.4						27.4	26.4	27.4	27.4	
Actuated g/C Ratio		0.62						0.32	0.31	0.32	0.32	
v/c Ratio		0.46						0.31	0.17	0.62	0.46	
Control Delay		0.5						23.4	9.7	47.8	39.4	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		0.5						23.4	9.7	47.8	39.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A						C	A	D	D	
Approach Delay		0.5						19.0			43.0	
Approach LOS		A						B			D	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 31 (36%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 51.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 146: Tupper & Washington

Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1449	188	90	204	274
v/c Ratio	0.46	0.31	0.17	0.62	0.46
Control Delay	0.5	23.4	9.7	47.8	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.5	23.4	9.7	47.8	39.4
Queue Length 50th (ft)	0	75	10	110	144
Queue Length 95th (ft)	0	112	43	151	175
Internal Link Dist (ft)	208	276			638
Turn Bay Length (ft)					
Base Capacity (vph)	3139	612	545	329	601
Starvation Cap Reductn	230	0	0	0	0
Spillback Cap Reductn	18	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.31	0.17	0.62	0.46

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	1705	0	0	0	0	0	290	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.992				
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3511	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3511	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1						6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		380			319			560			585	
Travel Time (s)		8.6			7.3			12.7			13.3	
Peak Hour Factor	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)	6	1894	0	0	0	0	0	322	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1900	0	0	0	0	0	339	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	45.0	45.0						21.2				
Total Split (s)	59.0	59.0	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.0	0.0	0.0
Total Split (%)	69.4%	69.4%	0.0%	0.0%	0.0%	0.0%	0.0%	30.6%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	53.8	53.8						20.8				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	2.0	2.0						2.0				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.2	4.2	3.0	3.0	3.0	3.0	3.0	4.2	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		54.8						21.8				
Actuated g/C Ratio		0.64						0.26				
v/c Ratio		0.83						0.37				
Control Delay		7.5						32.9				
Queue Delay		2.9						0.0				
Total Delay		10.4						32.9				
LOS		B						C				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.4						32.9				
Approach LOS		B						C				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 13.8	Intersection LOS: B
Intersection Capacity Utilization 62.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 152: Tupper & Elm St

Lane Group	EBT	NBT
Lane Group Flow (vph)	1900	339
v/c Ratio	0.83	0.37
Control Delay	7.5	32.9
Queue Delay	2.9	0.0
Total Delay	10.4	32.9
Queue Length 50th (ft)	131	63
Queue Length 95th (ft)	m182	94
Internal Link Dist (ft)	300	480
Turn Bay Length (ft)		
Base Capacity (vph)	2282	905
Starvation Cap Reductn	273	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.95	0.37

Intersection Summary

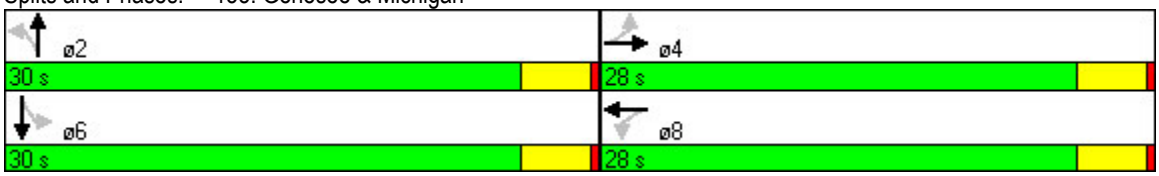
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	135	20	10	100	25	10	330	30	55	210	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.984			0.975			0.988			0.985	
Flt Protected		0.992			0.996			0.999			0.991	
Satd. Flow (prot)	0	3455	0	0	1809	0	0	3493	0	0	3455	0
Flt Permitted		0.907			0.980			0.946			0.839	
Satd. Flow (perm)	0	3159	0	0	1780	0	0	3308	0	0	2925	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			25			21			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			1157			873			441	
Travel Time (s)		11.8			26.3			19.8			10.0	
Peak Hour Factor	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)	33	150	22	11	111	28	11	367	33	61	233	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	205	0	0	150	0	0	411	0	0	327	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	48.3%	48.3%	0.0%	48.3%	48.3%	0.0%	51.7%	51.7%	0.0%	51.7%	51.7%	0.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		25.0			25.0			27.0			27.0	
Actuated g/C Ratio		0.43			0.43			0.47			0.47	
v/c Ratio		0.15			0.19			0.26			0.24	
Control Delay		9.3			9.3			9.5			9.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.3			9.3			9.5			9.0	
LOS		A			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.3			9.3			9.5			9.0	
Approach LOS		A			A			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.26	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 44.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 155: Genesee & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	205	150	411	327
v/c Ratio	0.15	0.19	0.26	0.24
Control Delay	9.3	9.3	9.5	9.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.3	9.3	9.5	9.0
Queue Length 50th (ft)	18	25	40	30
Queue Length 95th (ft)	36	55	65	52
Internal Link Dist (ft)	438	1077	793	361
Turn Bay Length (ft)				
Base Capacity (vph)	1374	781	1551	1377
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.19	0.26	0.24

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	155	500	105	15	5	45	280	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	
Flt Protected		0.988				0.983		
Satd. Flow (prot)	0	5049	1538	0	0	1742	2731	0
Flt Permitted		0.988				0.983		
Satd. Flow (perm)	0	5049	1538	0	0	1742	2731	0
Right Turn on Red								Yes
Satd. Flow (RTOR)							50	
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	191	575	114	21	8	55	311	114
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	766	114	0	0	84	425	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	
Total Split (s)	60.0	60.0	60.0	25.0	25.0	25.0	25.0	0.0
Total Split (%)	70.6%	70.6%	70.6%	29.4%	29.4%	29.4%	29.4%	0.0%
Maximum Green (s)	55.4	55.4	55.4	20.4	20.4	20.4	20.4	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	3.5
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	
Act Effct Green (s)		55.4	55.4			20.9	20.9	
Actuated g/C Ratio		0.65	0.65			0.25	0.25	
v/c Ratio		0.23	0.11			0.20	0.60	
Control Delay		9.2	8.6			16.8	29.0	
Queue Delay		0.5	0.0			0.0	0.0	
Total Delay		9.7	8.6			16.8	29.0	

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		A	A			B	C	
Approach Delay		9.5				16.8		
Approach LOS		A				B		

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 8 (9%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 39.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 159: Pearl & Main

Lane Group	WBT	WBR	NBT	SBR
Lane Group Flow (vph)	766	114	84	425
v/c Ratio	0.23	0.11	0.20	0.60
Control Delay	9.2	8.6	16.8	29.0
Queue Delay	0.5	0.0	0.0	0.0
Total Delay	9.7	8.6	16.8	29.0
Queue Length 50th (ft)	72	27	36	100
Queue Length 95th (ft)	m83	m46	66	153
Internal Link Dist (ft)	206		625	
Turn Bay Length (ft)				
Base Capacity (vph)	3291	1002	428	709
Starvation Cap Reductn	1950	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.57	0.11	0.20	0.60

Intersection Summary

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

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	85	1310	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.997				
Satd. Flow (prot)	0	5070	0	0	1863	0
Flt Permitted		0.997				
Satd. Flow (perm)	0	5070	0	0	1863	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		161	288		705	
Travel Time (s)		3.7	6.5		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	1456	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1550	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm					
Protected Phases		4			6	
Permitted Phases	4					
Minimum Split (s)	40.0	40.0			20.6	
Total Split (s)	55.0	55.0	0.0	0.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)	50.4	50.4			25.4	
Yellow Time (s)	3.2	3.2			3.2	
All-Red Time (s)	1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.6	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0	
Act Effct Green (s)		51.4				
Actuated g/C Ratio		0.60				
v/c Ratio		0.51				
Control Delay		10.3				
Queue Delay		0.0				
Total Delay		10.3				
LOS		B				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		10.3				
Approach LOS		B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 24 (28%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 30.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 160: Tupper & Main

Lane Group	EBT
Lane Group Flow (vph)	1550
v/c Ratio	0.51
Control Delay	10.3
Queue Delay	0.0
Total Delay	10.3
Queue Length 50th (ft)	156
Queue Length 95th (ft)	191
Internal Link Dist (ft)	81
Turn Bay Length (ft)	
Base Capacity (vph)	3066
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.51

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	115	690	100	40	225	0	0	565	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.983						0.976	
Flt Protected					0.994		0.950					
Satd. Flow (prot)	0	0	0	0	6261	0	1770	1863	0	0	3454	0
Flt Permitted					0.994		0.200					
Satd. Flow (perm)	0	0	0	0	6261	0	373	1863	0	0	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					58						24	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	128	767	111	44	250	0	0	628	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1006	0	44	250	0	0	750	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	15.0	50.0	0.0	0.0	20.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%	17.6%	58.8%	0.0%	0.0%	23.5%	0.0%
Maximum Green (s)				46.0	46.0		11.0				16.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

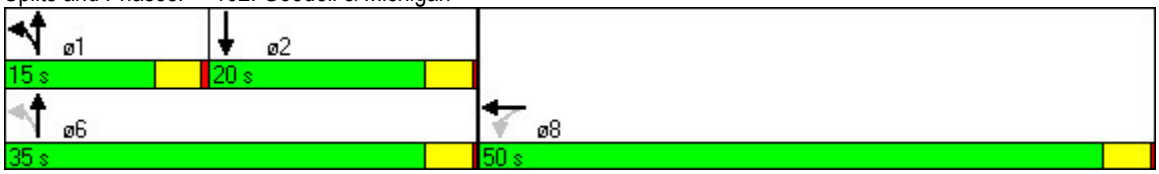
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	35.0
Total Split (%)	41%
Maximum Green (s)	31.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					47.0		31.6	31.6			17.0	
Actuated g/C Ratio					0.56		0.37	0.37			0.20	
v/c Ratio					0.29		0.13	0.36			1.05	
Control Delay					9.6		18.0	21.0			81.7	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					9.6		18.0	21.0			81.7	
LOS					A		B	C			F	
Approach Delay					9.6			20.6			81.7	
Approach LOS					A			C			F	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 84.6
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 37.5 — Intersection LOS: D
Intersection Capacity Utilization 45.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 162: Goodell & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	1006	44	250	750
v/c Ratio	0.29	0.13	0.36	1.05
Control Delay	9.6	18.0	21.0	81.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.6	18.0	21.0	81.7
Queue Length 50th (ft)	72	15	94	~228
Queue Length 95th (ft)	91	36	154	#343
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	3505	338	704	713
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.13	0.36	1.05

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	15	705	325	90	120	0	0	605	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.99							
Frt					0.953						0.992	
Flt Protected					0.999			0.978				
Satd. Flow (prot)	0	0	0	0	6128	0	0	1825	0	0	1848	0
Flt Permitted					0.999			0.110				
Satd. Flow (perm)	0	0	0	0	6128	0	0	205	0	0	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					253						4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		326			375			732			791	
Travel Time (s)		7.4			8.5			16.6			18.0	
Confl. Peds. (#/hr)						3						
Peak Hour Factor	0.90	0.90	0.90	0.50	0.85	0.83	0.78	0.88	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	1%	0%	4%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	30	829	392	115	136	0	0	672	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1251	0	0	251	0	0	716	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Minimum Split (s)				40.0	40.0		25.0	25.0			20.6	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	30.0	30.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	35.3%	35.3%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.4	50.4		25.4	25.4			25.4	
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)					52.4			27.4			26.4	
Actuated g/C Ratio					0.62			0.32			0.31	
v/c Ratio					0.32			3.80			1.24	
Control Delay					2.3			1308.2			151.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0			0.0			0.0	
Total Delay					2.3			1308.2			151.3	
LOS					A			F			F	
Approach Delay					2.3			1308.2			151.3	
Approach LOS					A			F			F	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 43 (51%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 3.80	
Intersection Signal Delay: 198.2	Intersection LOS: F
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 163: Goodell & Ellicott

Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	1251	251	716
v/c Ratio	0.32	3.80	1.24
Control Delay	2.3	1308.2	151.3
Queue Delay	0.0	0.0	0.0
Total Delay	2.3	1308.2	151.3
Queue Length 50th (ft)	6	~252	~484
Queue Length 95th (ft)	7	#362	#698
Internal Link Dist (ft)	295	652	711
Turn Bay Length (ft)			
Base Capacity (vph)	3875	66	577
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.32	3.80	1.24

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	30	515	10	95	285	0	0	240	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997							0.850
Flt Protected					0.997			0.986				
Satd. Flow (prot)	0	0	0	0	6363	0	0	1787	0	0	1792	1429
Flt Permitted					0.997			0.648				
Satd. Flow (perm)	0	0	0	0	6363	0	0	1174	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					7							26
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	33	579	11	127	317	0	0	276	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	623	0	0	444	0	0	276	26
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	30.0	30.0	0.0	0.0	30.0	30.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	35.3%	35.3%	0.0%	0.0%	35.3%	35.3%
Maximum Green (s)				50.4	50.4		25.4	25.4			25.4	25.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					52.4			27.4			27.4	27.4
Actuated g/C Ratio					0.62			0.32			0.32	0.32
v/c Ratio					0.16			1.17			0.48	0.05
Control Delay					4.0			127.6			26.5	8.4
Queue Delay					0.0			0.0			0.0	0.0
Total Delay					4.0			127.6			26.5	8.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			F			C	A
Approach Delay					4.0			127.6			24.9	
Approach LOS					A			F			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 48.7	Intersection LOS: D
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 164: Goodell & Washington

Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	623	444	276	26
v/c Ratio	0.16	1.17	0.48	0.05
Control Delay	4.0	127.6	26.5	8.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.0	127.6	26.5	8.4
Queue Length 50th (ft)	22	~293	117	0
Queue Length 95th (ft)	m23	#477	181	7
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3925	378	578	478
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	1.17	0.48	0.05

Intersection Summary

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

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	330	95	55	135	0	0	0	0	35	1950	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.966										0.850
Flt Protected					0.986						0.999	
Satd. Flow (prot)	0	3419	0	0	3490	0	0	0	0	0	5080	1583
Flt Permitted					0.736						0.999	
Satd. Flow (perm)	0	3419	0	0	2605	0	0	0	0	0	5080	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8										156
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			465			349			422	
Travel Time (s)		3.8			10.6			7.9			9.6	
Peak Hour Factor	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)	0	367	106	61	150	0	0	0	0	39	2167	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	473	0	0	211	0	0	0	0	0	2206	156
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Minimum Split (s)		20.9		20.9	20.9					47.0	47.0	47.0
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	55.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	64.7%
Maximum Green (s)		25.1		25.1	25.1					50.1	50.1	50.1
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		1.7		1.7	1.7					1.7	1.7	1.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.9	3.0	3.9	3.9	3.0	3.0	3.0	3.0	3.9	3.9	3.9
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		26.1			26.1						51.1	51.1
Actuated g/C Ratio		0.31			0.31						0.60	0.60
v/c Ratio		0.45			0.26						0.72	0.15
Control Delay		24.9			13.7						19.2	4.4
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		24.9			13.7						19.2	4.4
LOS		C			B						B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		24.9			13.7						18.2	
Approach LOS		C			B						B	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Green, Master Intersection	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 312: Genesee & Oak

Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	473	211	2206	156
v/c Ratio	0.45	0.26	0.72	0.15
Control Delay	24.9	13.7	19.2	4.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	24.9	13.7	19.2	4.4
Queue Length 50th (ft)	104	26	335	9
Queue Length 95th (ft)	148	m38	m383	m35
Internal Link Dist (ft)	89	385	342	
Turn Bay Length (ft)				
Base Capacity (vph)	1055	800	3054	1014
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.26	0.72	0.15

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	95	0	0	125	20	50	1850	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.980				0.850			
Flt Protected		0.974						0.999				
Satd. Flow (prot)	0	3447	0	0	3468	0	0	5080	1583	0	0	0
Flt Permitted		0.734						0.999				
Satd. Flow (perm)	0	2598	0	0	3468	0	0	5080	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11				56			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		465			518			436			260	
Travel Time (s)		10.6			11.8			9.9			5.9	
Peak Hour Factor	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)	122	106	0	0	139	22	56	2056	56	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	0	0	161	0	0	2112	56	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm		Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Minimum Split (s)	24.0	24.0			24.0		42.0	42.0	42.0			
Total Split (s)	29.0	29.0	0.0	0.0	29.0	0.0	56.0	56.0	56.0	0.0	0.0	0.0
Total Split (%)	34.1%	34.1%	0.0%	0.0%	34.1%	0.0%	65.9%	65.9%	65.9%	0.0%	0.0%	0.0%
Maximum Green (s)	24.2	24.2			24.2		51.2	51.2	51.2			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	1.6	1.6			1.6		1.6	1.6	1.6			
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.8	3.8	3.0	3.0	3.8	3.0	3.8	3.8	3.8	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)		25.2			25.2			52.2	52.2			
Actuated g/C Ratio		0.30			0.30			0.61	0.61			
v/c Ratio		0.30			0.16			0.68	0.06			
Control Delay		7.9			21.0			3.6	0.1			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		7.9			21.0			3.6	0.1			
LOS		A			C			A	A			
Approach Delay		7.9			21.0			3.5				
Approach LOS		A			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 4 (5%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 5.0	Intersection LOS: A
Intersection Capacity Utilization 56.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 313: Genesee & Elm St

Lane Group	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	228	161	2112	56
v/c Ratio	0.30	0.16	0.68	0.06
Control Delay	7.9	21.0	3.6	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.9	21.0	3.6	0.1
Queue Length 50th (ft)	12	31	61	0
Queue Length 95th (ft)	m17	54	61	m0
Internal Link Dist (ft)	385	438	356	
Turn Bay Length (ft)				200
Base Capacity (vph)	770	1036	3120	994
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.30	0.16	0.68	0.06

Intersection Summary

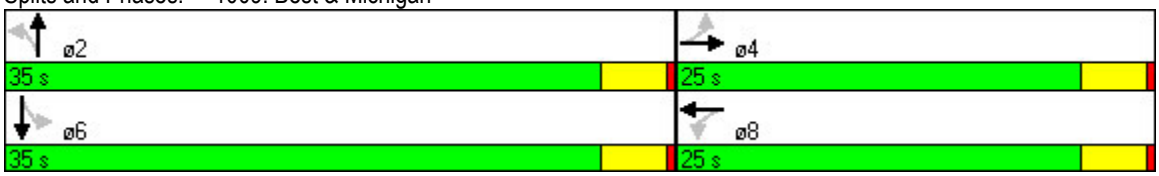
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	250	25	15	120	15	5	155	20	20	80	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.986			0.985			0.993	
Flt Protected		0.999			0.995			0.999			0.991	
Satd. Flow (prot)	0	1839	0	0	1827	0	0	1833	0	0	1833	0
Flt Permitted		0.996			0.959			0.995			0.944	
Satd. Flow (perm)	0	1833	0	0	1761	0	0	1826	0	0	1746	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			11			16			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			349			643			576	
Travel Time (s)		21.9			7.9			14.6			13.1	
Peak Hour Factor	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)	6	278	28	17	133	17	6	172	22	22	89	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312	0	0	167	0	0	200	0	0	117	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
v/c Ratio		0.46			0.26			0.20			0.13	
Control Delay		16.8			13.7			7.4			7.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.8			13.7			7.4			7.1	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		16.8			13.7			7.4			7.1	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 37.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1009: Best & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	312	167	200	117
v/c Ratio	0.46	0.26	0.20	0.13
Control Delay	16.8	13.7	7.4	7.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.8	13.7	7.4	7.1
Queue Length 50th (ft)	81	38	31	18
Queue Length 95th (ft)	143	77	61	39
Internal Link Dist (ft)	884	269	563	496
Turn Bay Length (ft)				
Base Capacity (vph)	678	653	981	934
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.26	0.20	0.13

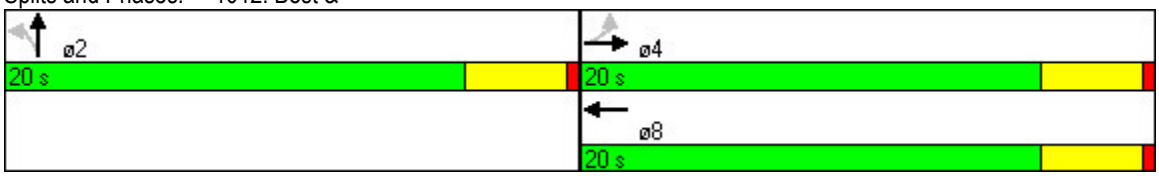
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	260	0	0	105	30	50	65	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.970			0.954				
Flt Protected		0.998						0.985				
Satd. Flow (prot)	0	1859	0	0	1807	0	0	3326	0	0	0	0
Flt Permitted		0.991						0.985				
Satd. Flow (perm)	0	1846	0	0	1807	0	0	3326	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					33			56				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		178			964			653			187	
Travel Time (s)		4.0			21.9			14.8			4.3	
Peak Hour Factor	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)	11	289	0	0	117	33	56	72	56	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	300	0	0	150	0	0	184	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	20.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	0.0%	50.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0			16.0		16.0	16.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.0			17.0			17.0				
Actuated g/C Ratio		0.42			0.42			0.42				
v/c Ratio		0.38			0.19			0.13				
Control Delay		9.7			6.6			5.4				
Queue Delay		0.0			0.0			0.0				
Total Delay		9.7			6.6			5.4				
LOS		A			A			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.7			6.6			5.4				
Approach LOS		A			A			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 40	
Actuated Cycle Length: 40	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 33.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1012: Best &



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	300	150	184
v/c Ratio	0.38	0.19	0.13
Control Delay	9.7	6.6	5.4
Queue Delay	0.0	0.0	0.0
Total Delay	9.7	6.6	5.4
Queue Length 50th (ft)	42	15	8
Queue Length 95th (ft)	84	38	20
Internal Link Dist (ft)	98	884	573
Turn Bay Length (ft)			
Base Capacity (vph)	785	787	1446
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.38	0.19	0.13

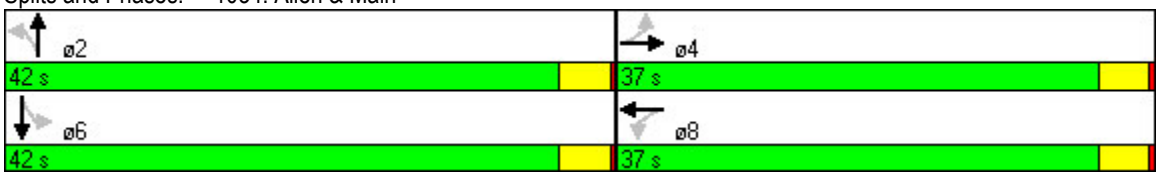
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	15	95	5	20	5	75	475	5	5	260	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.927			0.976			0.999			0.964	
Flt Protected		0.982			0.991			0.993			0.999	
Satd. Flow (prot)	0	1696	0	0	1802	0	0	5045	0	0	3408	0
Flt Permitted		0.891			0.964			0.838			0.948	
Satd. Flow (perm)	0	1539	0	0	1753	0	0	4257	0	0	3234	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		93			6			2			76	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		319			288			287			353	
Travel Time (s)		7.3			6.5			6.5			8.0	
Peak Hour Factor	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)	72	17	106	6	22	6	83	528	6	6	289	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	195	0	0	34	0	0	617	0	0	389	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	37.0	37.0	0.0	37.0	37.0	0.0	42.0	42.0	0.0	42.0	42.0	0.0
Total Split (%)	46.8%	46.8%	0.0%	46.8%	46.8%	0.0%	53.2%	53.2%	0.0%	53.2%	53.2%	0.0%
Maximum Green (s)	33.0	33.0		33.0	33.0		38.0	38.0		38.0	38.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	0.0	-1.0	0.0	0.0	0.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	3.0	4.0	4.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		33.0			33.0			39.0			39.0	
Actuated g/C Ratio		0.42			0.42			0.49			0.49	
v/c Ratio		0.28			0.05			0.29			0.24	
Control Delay		9.2			12.2			12.3			9.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.2			12.2			12.3			9.5	
LOS		A			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.2			12.2			12.3			9.5	
Approach LOS		A			B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 79	
Actuated Cycle Length: 79	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 10.9	Intersection LOS: B
Intersection Capacity Utilization 47.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1034: Allen & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	195	34	617	389
v/c Ratio	0.28	0.05	0.29	0.24
Control Delay	9.2	12.2	12.3	9.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.2	12.2	12.3	9.5
Queue Length 50th (ft)	30	8	62	43
Queue Length 95th (ft)	73	24	85	68
Internal Link Dist (ft)	239	208	207	273
Turn Bay Length (ft)				
Base Capacity (vph)	697	736	2103	1635
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.05	0.29	0.24

Intersection Summary

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	315	1625	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.88	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	3539	2787	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	3539	2787	0	0	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	260			560	477	
Travel Time (s)	5.9			12.7	10.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	350	1806	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	350	1806	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.2%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1720	0	0	0	0	1625
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			969	284	
Travel Time (s)	7.3			22.0	6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1911	0	0	0	0	1806
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1911	0	0	0	0	1806
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 111.1%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	755	1465	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	3539	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	422			611	490	
Travel Time (s)	9.6			13.9	11.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	839	1628	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	839	1628	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 152.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	1465	905	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	3433	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	3433	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	223			540	780	
Travel Time (s)	5.1			12.3	17.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	1628	1006	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1628	1006	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 152.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	235	170	460	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.95	0.95
Frt			0.937			
Flt Protected						0.972
Satd. Flow (prot)	0	0	3316	0	0	3440
Flt Permitted						0.972
Satd. Flow (perm)	0	0	3316	0	0	3440
Link Speed (mph)	30		30			30
Link Distance (ft)	547		441			294
Travel Time (s)	12.4		10.0			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	261	189	511	361
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	450	0	0	872
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	235	170	460	325
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	261	189	511	361
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			441			636
pX, platoon unblocked	0.84	0.99			0.99	
vC, conflicting volume	1558	225			450	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1251	207			433	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			54	
cM capacity (veh/h)	75	794			1115	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	174	276	631	241
Volume Left	0	0	511	0
Volume Right	0	189	0	0
cSH	1700	1700	1115	1700
Volume to Capacity	0.10	0.16	0.46	0.14
Queue Length 95th (ft)	0	0	61	0
Control Delay (s)	0.0	0.0	9.9	0.0
Lane LOS			A	
Approach Delay (s)	0.0		7.1	
Approach LOS				

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	44.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	145	30	15	195	50	30	435	25	60	320	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.980			0.974			0.992			0.989	
Flt Protected		0.993			0.997			0.997			0.993	
Satd. Flow (prot)	0	1813	0	0	1809	0	0	5029	0	0	3476	0
Flt Permitted		0.896			0.981			0.898			0.856	
Satd. Flow (perm)	0	1636	0	0	1780	0	0	4530	0	0	2996	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			16			10			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		111			158			910			482	
Travel Time (s)		2.5			3.6			20.7			11.0	
Peak Hour Factor	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)	33	161	33	17	217	56	33	483	28	67	356	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	0	0	290	0	0	544	0	0	456	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	1 6	
Permitted Phases	4			8			2			1 6		
Detector Phase	4	4		8	8		2	2		1	1 6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		10.0		
Total Split (s)	33.0	33.0	0.0	33.0	33.0	0.0	29.0	29.0	0.0	22.0	73.0	0.0
Total Split (%)	39.3%	39.3%	0.0%	39.3%	39.3%	0.0%	34.5%	34.5%	0.0%	26.2%	86.9%	0.0%
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		16.0		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		5.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5		

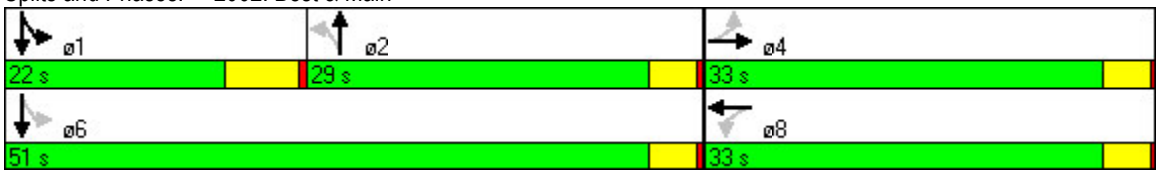
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	51.0
Total Split (%)	61%
Maximum Green (s)	47.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-3.0	-3.0	-1.0
Total Lost Time (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
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		
Recall Mode	Min	Min		Min	Min		Max	Max		Max		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0	0		0	0				
Act Effct Green (s)		17.2			17.2			26.1			48.2	
Actuated g/C Ratio		0.24			0.24			0.37			0.68	
v/c Ratio		0.56			0.66			0.33			0.21	
Control Delay		28.1			30.5			17.4			5.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		28.1			30.5			17.4			5.1	
LOS		C			C			B			A	
Approach Delay		28.1			30.5			17.4			5.1	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 84
Actuated Cycle Length: 71.4
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 17.8 — Intersection LOS: B
Intersection Capacity Utilization 51.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2002: Best & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	227	290	544	456
v/c Ratio	0.56	0.66	0.33	0.21
Control Delay	28.1	30.5	17.4	5.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.1	30.5	17.4	5.1
Queue Length 50th (ft)	83	109	60	31
Queue Length 95th (ft)	147	182	100	65
Internal Link Dist (ft)	31	78	830	402
Turn Bay Length (ft)				
Base Capacity (vph)	697	760	1663	2156
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.33	0.38	0.33	0.21

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	115	45	25	175	40	125	435	20	25	375	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.974			0.978			0.995			0.979	
Flt Protected		0.985			0.995			0.989			0.997	
Satd. Flow (prot)	0	1787	0	0	1813	0	0	5004	0	0	3454	0
Flt Permitted		0.760			0.958			0.771			0.906	
Satd. Flow (perm)	0	1379	0	0	1745	0	0	3901	0	0	3139	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			15			12			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		250			335			338			910	
Travel Time (s)		5.7			7.6			7.7			20.7	
Peak Hour Factor	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)	78	128	50	28	194	44	139	483	22	28	417	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	256	0	0	266	0	0	644	0	0	517	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	14.0	60.0	0.0	32.0	32.0	0.0
Total Split (%)	38.7%	38.7%	0.0%	38.7%	38.7%	0.0%	18.7%	80.0%	0.0%	42.7%	42.7%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0			28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

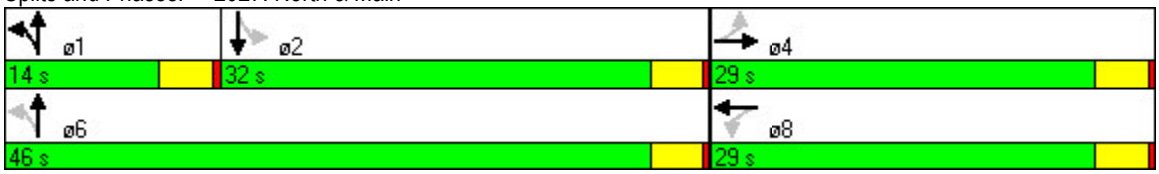
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	46.0
Total Split (%)	61%
Maximum Green (s)	42.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		None			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		16.3			16.3			42.1			29.3	
Actuated g/C Ratio		0.25			0.25			0.65			0.45	
v/c Ratio		0.71			0.59			0.24			0.36	
Control Delay		31.5			25.4			5.2			12.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		31.5			25.4			5.2			12.9	
LOS		C			C			A			B	
Approach Delay		31.5			25.4			5.2			12.9	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 64.5
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 14.8 — Intersection LOS: B
Intersection Capacity Utilization 62.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2027: North & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	256	266	644	517
v/c Ratio	0.71	0.59	0.24	0.36
Control Delay	31.5	25.4	5.2	12.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	31.5	25.4	5.2	12.9
Queue Length 50th (ft)	86	87	30	63
Queue Length 95th (ft)	158	153	61	120
Internal Link Dist (ft)	170	255	258	830
Turn Bay Length (ft)				
Base Capacity (vph)	571	718	2817	1439
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.37	0.23	0.36

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	45	55	600	15	20	630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.926		0.996			
Flt Protected	0.978					0.998
Satd. Flow (prot)	1687	0	5016	0	0	3498
Flt Permitted	0.978					0.927
Satd. Flow (perm)	1687	0	5016	0	0	3249
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	61		9			
Link Speed (mph)	30		30			30
Link Distance (ft)	394		482			736
Travel Time (s)	9.0		11.0			16.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Adj. Flow (vph)	50	61	667	17	22	700
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	0	684	0	0	722
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Maximum Green (s)	21.0		51.0		51.0	51.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	8.1		62.1			62.1
Actuated g/C Ratio	0.11		0.82			0.82
v/c Ratio	0.47		0.17			0.27
Control Delay	22.6		2.1			2.5
Queue Delay	0.0		0.0			0.0
Total Delay	22.6		2.1			2.5
LOS	C		A			A
Approach Delay	22.6		2.1			2.5
Approach LOS	C		A			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.3
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 3.8 — Intersection LOS: A
Intersection Capacity Utilization 44.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2101: Dodge & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	111	684	722
v/c Ratio	0.47	0.17	0.27
Control Delay	22.6	2.1	2.5
Queue Delay	0.0	0.0	0.0
Total Delay	22.6	2.1	2.5
Queue Length 50th (ft)	23	19	33
Queue Length 95th (ft)	63	36	64
Internal Link Dist (ft)	314	402	656
Turn Bay Length (ft)			
Base Capacity (vph)	515	4139	2680
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.22	0.17	0.27

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	30	20	5	40	5	190	685	20	10	420	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.951			0.986			0.997			0.993	
Flt Protected		0.995			0.995			0.989			0.999	
Satd. Flow (prot)	0	1763	0	0	1827	0	0	1837	0	0	1848	0
Flt Permitted		0.961			0.961			0.780			0.977	
Satd. Flow (perm)	0	1702	0	0	1765	0	0	1449	0	0	1807	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			6			3			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			388			675			662	
Travel Time (s)		8.6			8.8			15.3			15.0	
Peak Hour Factor	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)	6	33	22	6	44	6	211	761	22	11	467	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	61	0	0	56	0	0	994	0	0	506	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	14.0	51.0	0.0	23.0	23.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%	23.3%	85.0%	0.0%	38.3%	38.3%	0.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		10.0			19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	37.0
Total Split (%)	62%
Maximum Green (s)	33.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		Max			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		7.8			7.8			34.6			20.4	
Actuated g/C Ratio		0.18			0.18			0.79			0.46	
v/c Ratio		0.19			0.18			0.80			0.60	
Control Delay		13.9			16.9			13.0			14.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.9			16.9			13.0			14.5	
LOS		B			B			B			B	
Approach Delay		13.9			16.9			13.0			14.5	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 44
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 13.6 — Intersection LOS: B
Intersection Capacity Utilization 85.9% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Carlton & Michigan

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	61	56	994	506
v/c Ratio	0.19	0.18	0.80	0.60
Control Delay	13.9	16.9	13.0	14.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.9	16.9	13.0	14.5
Queue Length 50th (ft)	9	12	116	105
Queue Length 95th (ft)	34	36	#484	#210
Internal Link Dist (ft)	297	308	595	582
Turn Bay Length (ft)				
Base Capacity (vph)	800	821	1240	839
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.08	0.07	0.80	0.60

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	110	30	15	65	20	55	440	40	5	145	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.973			0.990			0.988	
Flt Protected		0.998			0.992			0.995			0.998	
Satd. Flow (prot)	0	1807	0	0	1798	0	0	1835	0	0	1837	0
Flt Permitted		0.998			0.992			0.995			0.998	
Satd. Flow (perm)	0	1807	0	0	1798	0	0	1835	0	0	1837	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			293	
Travel Time (s)		7.4			17.0			9.7			6.7	
Peak Hour Factor	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)	6	122	33	17	72	22	61	489	44	6	161	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	0	111	0	0	594	0	0	184	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 59.0%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	110	30	15	65	20	55	440	40	5	145	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	122	33	17	72	22	61	489	44	6	161	17

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	161	111	594	183
Volume Left (vph)	6	17	61	6
Volume Right (vph)	33	22	44	17
Hadj (s)	-0.08	-0.06	0.01	-0.01
Departure Headway (s)	6.1	6.3	5.1	5.7
Degree Utilization, x	0.27	0.19	0.84	0.29
Capacity (veh/h)	540	521	696	592
Control Delay (s)	11.4	10.8	28.7	10.9
Approach Delay (s)	11.4	10.8	28.7	10.9
Approach LOS	B	B	D	B

Intersection Summary			
Delay	21.0		
HCM Level of Service	C		
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	130	35	40	80	15	10	80	25	10	60	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.972			0.985			0.970			0.989	
Flt Protected		0.998			0.986			0.996			0.993	
Satd. Flow (prot)	0	1807	0	0	1809	0	0	1800	0	0	3476	0
Flt Permitted		0.998			0.986			0.996			0.993	
Satd. Flow (perm)	0	1807	0	0	1809	0	0	1800	0	0	3476	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		287			325			1308			290	
Travel Time (s)		6.5			7.4			29.7			6.6	
Peak Hour Factor	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)	6	144	39	44	89	17	11	89	28	11	67	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	189	0	0	150	0	0	128	0	0	84	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 39.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	130	35	40	80	15	10	80	25	10	60	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	144	39	44	89	17	11	89	28	11	67	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	189	150	128	44	39
Volume Left (vph)	6	44	11	11	0
Volume Right (vph)	39	17	28	0	6
Hadj (s)	-0.08	0.03	-0.08	0.16	-0.07
Departure Headway (s)	4.5	4.7	4.9	5.6	5.4
Degree Utilization, x	0.24	0.20	0.17	0.07	0.06
Capacity (veh/h)	745	721	690	594	619
Control Delay (s)	9.0	8.8	8.9	7.8	7.5
Approach Delay (s)	9.0	8.8	8.9	7.7	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	8.7		
HCM Level of Service	A		
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	10	50	265	20	125	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.887		0.990			
Flt Protected	0.992					0.988
Satd. Flow (prot)	1639	0	3504	0	0	5024
Flt Permitted	0.992					0.988
Satd. Flow (perm)	1639	0	3504	0	0	5024
Link Speed (mph)	30		30			30
Link Distance (ft)	287		532			287
Travel Time (s)	6.5		12.1			6.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	56	294	22	139	456
Shared Lane Traffic (%)						
Lane Group Flow (vph)	67	0	316	0	0	595
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 32.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	50	265	20	125	410
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	56	294	22	139	456
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			532			287
pX, platoon unblocked	0.96					
vC, conflicting volume	735	158			317	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	584	158			317	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	97	94			89	
cM capacity (veh/h)	378	859			1240	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	67	196	120	230	182	182
Volume Left	11	0	0	139	0	0
Volume Right	56	0	22	0	0	0
cSH	709	1700	1700	1240	1700	1700
Volume to Capacity	0.09	0.12	0.07	0.11	0.11	0.11
Queue Length 95th (ft)	8	0	0	9	0	0
Control Delay (s)	10.6	0.0	0.0	5.4	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	10.6	0.0		2.1		
Approach LOS	B					

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	210	35	25	5	30	15	120	600	15	10	375	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.987			0.959			0.997			0.959	
Flt Protected		0.963			0.995			0.992			0.999	
Satd. Flow (prot)	0	1771	0	0	1777	0	0	1842	0	0	3391	0
Flt Permitted		0.774			0.965			0.826			0.942	
Satd. Flow (perm)	0	1423	0	0	1724	0	0	1534	0	0	3197	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			17			3			161	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1103			233			662			363	
Travel Time (s)		25.1			5.3			15.0			8.3	
Peak Hour Factor	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)	233	39	28	6	33	17	133	667	17	11	417	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	300	0	0	56	0	0	817	0	0	589	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.73			0.11			0.86			0.29	
Control Delay		32.0			13.0			21.8			4.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		32.0			13.0			21.8			4.2	
LOS		C			B			C			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		32.0			13.0			21.8			4.2	
Approach LOS		C			B			C			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 17.4	Intersection LOS: B
Intersection Capacity Utilization 86.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: High & Michigan

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	300	56	817	589
v/c Ratio	0.73	0.11	0.86	0.29
Control Delay	32.0	13.0	21.8	4.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	32.0	13.0	21.8	4.2
Queue Length 50th (ft)	94	10	206	30
Queue Length 95th (ft)	#205	33	#462	50
Internal Link Dist (ft)	1023	153	582	283
Turn Bay Length (ft)				
Base Capacity (vph)	410	501	947	2033
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.73	0.11	0.86	0.29

Intersection Summary

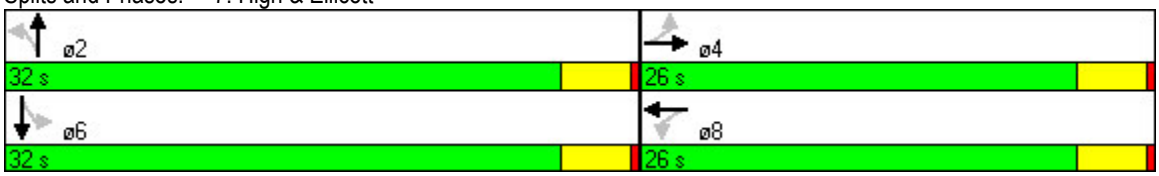
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	185	10	65	160	30	60	235	240	0	90	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.984			0.939				
Flt Protected		0.996			0.987			0.994				
Satd. Flow (prot)	0	1844	0	0	1809	0	0	1739	0	0	1863	0
Flt Permitted		0.972			0.877			0.960				
Satd. Flow (perm)	0	1800	0	0	1607	0	0	1679	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			14			101				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			1103			365			184	
Travel Time (s)		3.8			25.1			8.3			4.2	
Peak Hour Factor	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)	17	206	11	72	178	33	67	261	267	0	100	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	234	0	0	283	0	0	595	0	0	100	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	26.0	26.0	0.0	26.0	26.0	0.0	32.0	32.0	0.0	32.0	32.0	0.0
Total Split (%)	44.8%	44.8%	0.0%	44.8%	44.8%	0.0%	55.2%	55.2%	0.0%	55.2%	55.2%	0.0%
Maximum Green (s)	22.0	22.0		22.0	22.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		23.0			23.0			29.0			29.0	
Actuated g/C Ratio		0.40			0.40			0.50			0.50	
v/c Ratio		0.33			0.44			0.67			0.11	
Control Delay		13.5			14.8			13.4			8.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.5			14.8			13.4			8.1	
LOS		B			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		13.5			14.8			13.4			8.1	
Approach LOS		B			B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 13.3	Intersection LOS: B
Intersection Capacity Utilization 72.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: High & Ellicott



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	234	283	595	100
v/c Ratio	0.33	0.44	0.67	0.11
Control Delay	13.5	14.8	13.4	8.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.5	14.8	13.4	8.1
Queue Length 50th (ft)	53	65	116	17
Queue Length 95th (ft)	99	122	217	37
Internal Link Dist (ft)	89	1023	285	104
Turn Bay Length (ft)				
Base Capacity (vph)	717	646	890	932
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.33	0.44	0.67	0.11

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lane Configurations							
Volume (vph)	50	80	310	80	140	355	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91	
Frt	0.917		0.969				
Flt Protected	0.981					0.986	
Satd. Flow (prot)	1676	0	3430	0	0	5014	
Flt Permitted	0.981					0.768	
Satd. Flow (perm)	1676	0	3430	0	0	3906	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	89		52				
Link Speed (mph)	30		30			30	
Link Distance (ft)	293		353			353	
Travel Time (s)	6.7		8.0			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	56	89	344	89	156	394	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	145	0	433	0	0	550	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		1		1	1	
Detector Template							
Leading Detector (ft)	50		50		50	50	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	50		50		50	50	
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Turn Type					custom		
Protected Phases	8		2		1	1 6	6
Permitted Phases					6		
Detector Phase	8		2		1	1 6	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0		4.0
Minimum Split (s)	20.0		20.0		8.0		20.0
Total Split (s)	27.0	0.0	36.0	0.0	14.0	64.0	50.0
Total Split (%)	35.1%	0.0%	46.8%	0.0%	18.2%	83.1%	65%
Maximum Green (s)	23.0		32.0		10.0		46.0
Yellow Time (s)	3.5		3.5		3.5		3.5
All-Red Time (s)	0.5		0.5		0.5		0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lead/Lag			Lag		Lead		
Lead-Lag Optimize?			Yes		Yes		
Vehicle Extension (s)	3.0		3.0		3.0		3.0
Recall Mode	Min		Max		None		Max
Walk Time (s)	5.0		5.0				5.0
Flash Dont Walk (s)	11.0		11.0				11.0
Pedestrian Calls (#/hr)	0		0				0
Act Effct Green (s)	8.9		35.3			47.1	
Actuated g/C Ratio	0.14		0.57			0.76	
v/c Ratio	0.46		0.22			0.18	
Control Delay	15.8		6.7			2.4	
Queue Delay	0.0		0.0			0.0	
Total Delay	15.8		6.7			2.4	
LOS	B		A			A	
Approach Delay	15.8		6.7			2.4	
Approach LOS	B		A			A	

Intersection Summary

Area Type: Other
Cycle Length: 77
Actuated Cycle Length: 62
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 5.8 — Intersection LOS: A
Intersection Capacity Utilization 38.5% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: High & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	145	433	550
v/c Ratio	0.46	0.22	0.18
Control Delay	15.8	6.7	2.4
Queue Delay	0.0	0.0	0.0
Total Delay	15.8	6.7	2.4
Queue Length 50th (ft)	19	31	13
Queue Length 95th (ft)	63	65	29
Internal Link Dist (ft)	213	273	273
Turn Bay Length (ft)			
Base Capacity (vph)	704	1975	3162
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.21	0.22	0.17

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	15	25	0	0	0	210	930	10	5	370	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.926						0.999			0.995	
Flt Protected		0.994						0.991			0.999	
Satd. Flow (prot)	0	1715	0	0	0	0	0	1844	0	0	1852	0
Flt Permitted		0.994						0.841			0.986	
Satd. Flow (perm)	0	1715	0	0	0	0	0	1565	0	0	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28						1			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			376			922			675	
Travel Time (s)		8.3			8.5			21.0			15.3	
Peak Hour Factor	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)	6	17	28	0	0	0	233	1033	11	6	411	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	0	0	0	1277	0	0	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm			Perm		
Protected Phases		4						2			6	
Permitted Phases	4						2			6		
Minimum Split (s)	20.0	20.0					20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0					36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5					3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5					0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0					5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.0						37.0			37.0	
Actuated g/C Ratio		0.28						0.62			0.62	
v/c Ratio		0.10						1.32			0.38	
Control Delay		10.3						170.6			6.9	
Queue Delay		0.0						0.0			0.0	
Total Delay		10.3						170.6			6.9	
LOS		B						F			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.3						170.6			6.9	
Approach LOS		B						F			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.32	
Intersection Signal Delay: 125.6	Intersection LOS: F
Intersection Capacity Utilization 95.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Virginia & Michigan

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	51	1277	434
v/c Ratio	0.10	1.32	0.38
Control Delay	10.3	170.6	6.9
Queue Delay	0.0	0.0	0.0
Total Delay	10.3	170.6	6.9
Queue Length 50th (ft)	6	~627	66
Queue Length 95th (ft)	27	#854	112
Internal Link Dist (ft)	283	842	595
Turn Bay Length (ft)			
Base Capacity (vph)	506	965	1129
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.10	1.32	0.38

Intersection Summary

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

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	20	40	530	60	5	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.910		0.986			
Flt Protected	0.984					0.999
Satd. Flow (prot)	1668	0	1837	0	0	1861
Flt Permitted	0.984					0.999
Satd. Flow (perm)	1668	0	1837	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	735		148			425
Travel Time (s)	16.7		3.4			9.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	44	589	67	6	206
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	656	0	0	212
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	20	40	530	60	5	185
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	44	589	67	6	206
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			939			
pX, platoon unblocked						
vC, conflicting volume	839	622			656	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	839	622			656	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	91			99	
cM capacity (veh/h)	334	487			932	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	67	656	211
Volume Left	22	0	6
Volume Right	44	67	0
cSH	422	1700	932
Volume to Capacity	0.16	0.39	0.01
Queue Length 95th (ft)	14	0	0
Control Delay (s)	15.1	0.0	0.3
Lane LOS	C		A
Approach Delay (s)	15.1	0.0	0.3
Approach LOS	C		

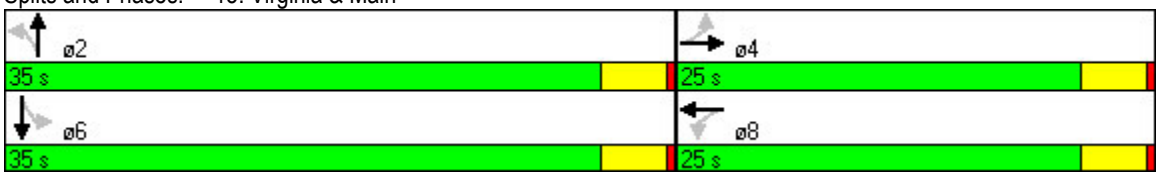
Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	35	15	5	10	5	10	210	5	10	245	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.973			0.965			0.996			0.977	
Flt Protected		0.984			0.987			0.998			0.998	
Satd. Flow (prot)	0	1783	0	0	1774	0	0	3518	0	0	4958	0
Flt Permitted		0.880			0.939			0.942			0.932	
Satd. Flow (perm)	0	1595	0	0	1688	0	0	3321	0	0	4630	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			6			6			50	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		513			160			728			532	
Travel Time (s)		11.7			3.6			16.5			12.1	
Peak Hour Factor	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)	28	39	17	6	11	6	11	233	6	11	272	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	23	0	0	250	0	0	333	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.6			7.4			42.4			42.4	
Actuated g/C Ratio		0.15			0.14			0.81			0.81	
v/c Ratio		0.34			0.09			0.09			0.09	
Control Delay		20.1			16.2			2.5			2.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.1			16.2			2.5			2.1	
LOS		C			B			A			A	
Approach Delay		20.1			16.2			2.5			2.1	
Approach LOS		C			B			A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 52.2	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.34	
Intersection Signal Delay: 4.9	Intersection LOS: A
Intersection Capacity Utilization 26.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 15: Virginia & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	84	23	250	333
v/c Ratio	0.34	0.09	0.09	0.09
Control Delay	20.1	16.2	2.5	2.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.1	16.2	2.5	2.1
Queue Length 50th (ft)	22	6	9	7
Queue Length 95th (ft)	45	18	21	16
Internal Link Dist (ft)	433	80	648	452
Turn Bay Length (ft)				
Base Capacity (vph)	655	686	2697	3768
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.13	0.03	0.09	0.09

Intersection Summary

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	125	30	15	60	5	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.974				0.889	
Flt Protected				0.990	0.991	
Satd. Flow (prot)	1814	0	0	1844	1641	0
Flt Permitted				0.990	0.991	
Satd. Flow (perm)	1814	0	0	1844	1641	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	747			377	583	
Travel Time (s)	17.0			8.6	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	139	33	17	67	6	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	172	0	0	84	34	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	125	30	15	60	5	25
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	139	33	17	67	6	28

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	172	83	33
Volume Left (vph)	0	17	6
Volume Right (vph)	33	0	28
Hadj (s)	-0.08	0.07	-0.43
Departure Headway (s)	4.0	4.2	4.0
Degree Utilization, x	0.19	0.10	0.04
Capacity (veh/h)	891	840	838
Control Delay (s)	7.9	7.7	7.2
Approach Delay (s)	7.9	7.7	7.2
Approach LOS	A	A	A

Intersection Summary			
Delay	7.7		
HCM Level of Service	A		
Intersection Capacity Utilization	25.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	25	40	35	235	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.883		0.966	
Flt Protected		0.981			0.964	
Satd. Flow (prot)	0	1827	1645	0	1735	0
Flt Permitted		0.981			0.964	
Satd. Flow (perm)	0	1827	1645	0	1735	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		735	363		583	
Travel Time (s)		16.7	8.3		13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	28	44	39	261	33	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	72	300	0	44	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 33.2%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	25	40	35	235	30	10
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)	28	44	39	261	33	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)			363			
pX, platoon unblocked						
vC, conflicting volume	300				269	169
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	300				269	169
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				95	99
cM capacity (veh/h)	1261				704	874

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	72	300	44
Volume Left	28	0	33
Volume Right	0	261	11
cSH	1261	1700	740
Volume to Capacity	0.02	0.18	0.06
Queue Length 95th (ft)	2	0	5
Control Delay (s)	3.2	0.0	10.2
Lane LOS	A		B
Approach Delay (s)	3.2	0.0	10.2
Approach LOS			B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	470	55	60	145	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986				0.865	
Flt Protected				0.986		
Satd. Flow (prot)	1837	0	0	1837	1611	0
Flt Permitted				0.986		
Satd. Flow (perm)	1837	0	0	1837	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	791			148	443	
Travel Time (s)	18.0			3.4	10.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	522	61	67	161	0	172
Shared Lane Traffic (%)						
Lane Group Flow (vph)	583	0	0	228	172	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	470	55	60	145	0	155
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)	522	61	67	161	0	172
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	791					
pX, platoon unblocked						
vC, conflicting volume			583		847	553
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			583		847	553
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		100	68
cM capacity (veh/h)			991		310	533

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	583	228	172
Volume Left	0	67	0
Volume Right	61	0	172
cSH	1700	991	533
Volume to Capacity	0.34	0.07	0.32
Queue Length 95th (ft)	0	5	35
Control Delay (s)	0.0	3.1	14.9
Lane LOS		A	B
Approach Delay (s)	0.0	3.1	14.9
Approach LOS			B

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	125	20	20	185	15	45	60	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.991			0.979				
Flt Protected		0.995			0.996			0.982				
Satd. Flow (prot)	0	1822	0	0	1839	0	0	1791	0	0	0	0
Flt Permitted		0.995			0.996			0.982				
Satd. Flow (perm)	0	1822	0	0	1839	0	0	1791	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			1080			316			653	
Travel Time (s)		6.8			24.5			7.2			14.8	
Peak Hour Factor	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)	17	139	22	22	206	17	50	67	22	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	178	0	0	245	0	0	139	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 28.9%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	125	20	20	185	15	45	60	20	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	139	22	22	206	17	50	67	22	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	178	244	139
Volume Left (vph)	17	22	50
Volume Right (vph)	22	17	22
Hadj (s)	-0.02	0.01	0.01
Departure Headway (s)	4.5	4.5	4.9
Degree Utilization, x	0.22	0.30	0.19
Capacity (veh/h)	765	770	685
Control Delay (s)	8.8	9.4	9.0
Approach Delay (s)	8.8	9.4	9.0
Approach LOS	A	A	A

Intersection Summary			
Delay	9.1		
HCM Level of Service	A		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	60	50	120	150	35	45	95	40	30	235	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.984				0.850		0.982	
Flt Protected		0.998			0.981			0.984			0.995	
Satd. Flow (prot)	0	1749	0	0	1798	0	0	1833	1583	0	1820	0
Flt Permitted		0.987			0.789			0.849			0.968	
Satd. Flow (perm)	0	1730	0	0	1446	0	0	1581	1583	0	1771	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51			9				44		23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			414			330			643	
Travel Time (s)		24.5			9.4			7.5			14.6	
Peak Hour Factor	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)	6	67	56	133	167	39	50	106	44	33	261	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	0	0	339	0	0	156	44	0	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	51.0	51.0	51.0	51.0	51.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	28.2%	28.2%	0.0%	71.8%	71.8%	71.8%	71.8%	71.8%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		17.0			17.0			48.5	48.5		48.5	
Actuated g/C Ratio		0.24			0.24			0.68	0.68		0.68	
v/c Ratio		0.29			0.97			0.15	0.04		0.28	
Control Delay		15.9			70.1			4.5	1.4		4.9	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		15.9			70.1			4.5	1.4		4.9	
LOS		B			E			A	A		A	
Approach Delay		15.9			70.1			3.9			4.9	
Approach LOS		B			E			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 71
Actuated Cycle Length: 71.5
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 28.1 — Intersection LOS: C
Intersection Capacity Utilization 53.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 21: North & Michigan

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	129	339	156	44	338
v/c Ratio	0.29	0.97	0.15	0.04	0.28
Control Delay	15.9	70.1	4.5	1.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	70.1	4.5	1.4	4.9
Queue Length 50th (ft)	27	143	21	0	45
Queue Length 95th (ft)	69	#302	39	8	77
Internal Link Dist (ft)	1000	334	250		563
Turn Bay Length (ft)					
Base Capacity (vph)	450	351	1072	1087	1209
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.29	0.97	0.15	0.04	0.28

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	10	5	10	5	20	60	20	5	50	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.955			0.965			0.973			0.987	
Flt Protected		0.984			0.987			0.990			0.996	
Satd. Flow (prot)	0	1750	0	0	1774	0	0	1794	0	0	3479	0
Flt Permitted		0.984			0.987			0.990			0.996	
Satd. Flow (perm)	0	1750	0	0	1774	0	0	1794	0	0	3479	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			326			290			355	
Travel Time (s)		6.5			7.4			6.6			8.1	
Peak Hour Factor	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)	11	11	11	6	11	6	22	67	22	6	56	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	33	0	0	23	0	0	111	0	0	68	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 22.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	10	10	10	5	10	5	20	60	20	5	50	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	11	11	6	11	6	22	67	22	6	56	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	33	22	111	33	33
Volume Left (vph)	11	6	22	6	0
Volume Right (vph)	11	6	22	0	6
Hadj (s)	-0.10	-0.07	-0.05	0.12	-0.08
Departure Headway (s)	4.2	4.3	4.2	4.8	4.6
Degree Utilization, x	0.04	0.03	0.13	0.04	0.04
Capacity (veh/h)	815	806	845	724	758
Control Delay (s)	7.4	7.4	7.8	6.8	6.6
Approach Delay (s)	7.4	7.4	7.8	6.7	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	7.4		
HCM Level of Service	A		
Intersection Capacity Utilization	22.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	35	0	35	165	65	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950			0.991		
Satd. Flow (prot)	1770	0	0	1846	1863	0
Flt Permitted	0.950			0.991		
Satd. Flow (perm)	1770	0	0	1846	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			181	316	
Travel Time (s)	14.9			4.1	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	0	39	183	72	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	222	72	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 27.3%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	0	35	165	65	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	0	39	183	72	0

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	39	222	72
Volume Left (vph)	39	39	0
Volume Right (vph)	0	0	0
Hadj (s)	0.23	0.07	0.03
Departure Headway (s)	4.8	4.1	4.3
Degree Utilization, x	0.05	0.26	0.09
Capacity (veh/h)	699	852	828
Control Delay (s)	8.0	8.6	7.6
Approach Delay (s)	8.0	8.6	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	8.3		
HCM Level of Service	A		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	0	5	10	0	15	25	330	15	5	260	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.932			0.918			0.994			0.987	
Flt Protected		0.976			0.981			0.997			0.999	
Satd. Flow (prot)	0	1694	0	0	1678	0	0	3507	0	0	5014	0
Flt Permitted		0.976			0.981			0.997			0.999	
Satd. Flow (perm)	0	1694	0	0	1678	0	0	3507	0	0	5014	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		304			655			353			338	
Travel Time (s)		6.9			14.9			8.0			7.7	
Peak Hour Factor	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)	6	0	6	11	0	17	28	367	17	6	289	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	12	0	0	28	0	0	412	0	0	323	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.3%	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)	5	0	5	10	0	15	25	330	15	5	260	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	0	6	11	0	17	28	367	17	6	289	28
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								353			338	
pX, platoon unblocked												
vC, conflicting volume	569	753	110	544	758	192	317			383		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	569	753	110	544	758	192	317			383		
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	100	99	97	100	98	98			100		
cM capacity (veh/h)	388	328	922	411	326	818	1240			1172		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	11	28	211	200	78	144	100
Volume Left	6	11	28	0	6	0	0
Volume Right	6	17	0	17	0	0	28
cSH	546	586	1240	1700	1172	1700	1700
Volume to Capacity	0.02	0.05	0.02	0.12	0.00	0.08	0.06
Queue Length 95th (ft)	2	4	2	0	0	0	0
Control Delay (s)	11.7	11.5	1.2	0.0	0.6	0.0	0.0
Lane LOS	B	B	A		A		
Approach Delay (s)	11.7	11.5	0.6		0.1		
Approach LOS	B	B					

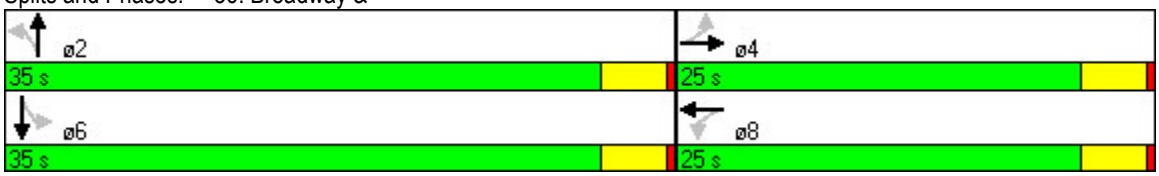
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	29.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	130	10	30	250	50	35	555	30	20	235	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.991			0.977			0.993			0.984	
Flt Protected		0.992			0.996			0.997			0.997	
Satd. Flow (prot)	0	3286	0	0	3346	0	0	3437	0	0	3405	0
Flt Permitted		0.880			0.920			0.923			0.902	
Satd. Flow (perm)	0	2915	0	0	3090	0	0	3181	0	0	3081	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			38			12			31	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		282			892			685			803	
Travel Time (s)		6.4			20.3			15.6			18.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	8%	5%	5%	5%	4%	4%	4%	4%	4%	4%
Adj. Flow (vph)	28	144	11	33	278	56	39	617	33	22	261	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	367	0	0	689	0	0	316	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.18			0.33			0.42			0.20	
Control Delay		13.3			13.8			9.7			5.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.3			13.8			9.7			5.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		13.3			13.8			9.7			5.9	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 52.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 36: Broadway &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	183	367	689	316
v/c Ratio	0.18	0.33	0.42	0.20
Control Delay	13.3	13.8	9.7	5.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.3	13.8	9.7	5.9
Queue Length 50th (ft)	22	44	72	21
Queue Length 95th (ft)	41	74	107	21
Internal Link Dist (ft)	202	812	605	723
Turn Bay Length (ft)				
Base Capacity (vph)	1027	1106	1649	1607
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.33	0.42	0.20

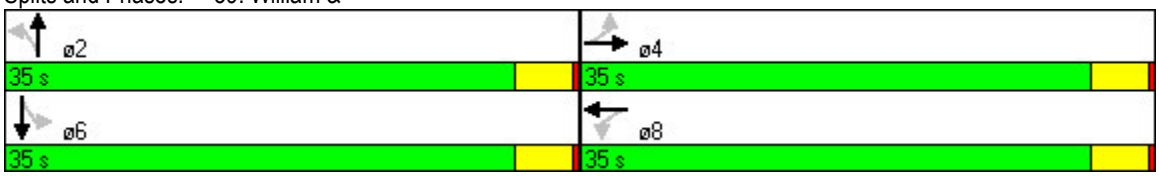
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	85	10	65	225	70	45	565	0	35	205	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.986			0.971						0.989	
Flt Protected		0.993			0.991			0.996			0.993	
Satd. Flow (prot)	0	3100	0	0	3406	0	0	3491	0	0	3376	0
Flt Permitted		0.898			0.881			0.910			0.835	
Satd. Flow (perm)	0	2804	0	0	3028	0	0	3189	0	0	2839	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			54						16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		293			645			273			685	
Travel Time (s)		6.7			14.7			6.2			15.6	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	14%	14%	14%	2%	2%	2%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	17	94	11	72	250	78	50	628	0	39	228	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	400	0	0	678	0	0	289	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		31.0			31.0			31.0			31.0	
Actuated g/C Ratio		0.44			0.44			0.44			0.44	
v/c Ratio		0.10			0.29			0.48			0.23	
Control Delay		10.6			11.4			15.2			12.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.6			11.4			15.2			12.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			B			B	
Approach Delay		10.6			11.4			15.2			12.0	
Approach LOS		B			B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 13.2	Intersection LOS: B
Intersection Capacity Utilization 48.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 39: William &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	122	400	678	289
v/c Ratio	0.10	0.29	0.48	0.23
Control Delay	10.6	11.4	15.2	12.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.6	11.4	15.2	12.0
Queue Length 50th (ft)	13	47	104	36
Queue Length 95th (ft)	28	75	148	60
Internal Link Dist (ft)	213	565	193	605
Turn Bay Length (ft)				
Base Capacity (vph)	1248	1371	1412	1266
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.10	0.29	0.48	0.23

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	0	3539	0	0	3539
Link Speed (mph)	30		30			30
Link Distance (ft)	329		351			273
Travel Time (s)	7.5		8.0			6.2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	0	0	0	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	0	0	0	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)						273
pX, platoon unblocked						
vC, conflicting volume	0	0			0	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0	0			0	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	1023	1084			1622	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	0	0	0	0
Volume Left	0	0	0	0
Volume Right	0	0	0	0
cSH	1700	1700	1700	1700
Volume to Capacity	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0
Lane LOS				
Approach Delay (s)	0.0		0.0	
Approach LOS				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	5	65	20	30	30	5	310	15	15	770	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.891			0.949			0.993			0.992	
Flt Protected		0.994			0.988			0.999			0.999	
Satd. Flow (prot)	0	1650	0	0	1713	0	0	3347	0	0	5040	0
Flt Permitted		0.967			0.902			0.944			0.932	
Satd. Flow (perm)	0	1605	0	0	1564	0	0	3163	0	0	4702	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			33			12			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		433			549			728			701	
Travel Time (s)		9.8			12.5			16.5			15.9	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	11	6	72	22	33	33	6	344	17	17	856	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	88	0	0	367	0	0	923	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.1			8.1			58.1			58.1	
Actuated g/C Ratio		0.11			0.11			0.81			0.81	
v/c Ratio		0.36			0.43			0.14			0.24	
Control Delay		14.5			25.8			2.2			2.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.5			25.8			2.2			2.3	
LOS		B			C			A			A	
Approach Delay		14.5			25.8			2.2			2.3	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 71.4
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 4.5 — Intersection LOS: A
Intersection Capacity Utilization 41.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 46: Delta Sonic & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	89	88	367	923
v/c Ratio	0.36	0.43	0.14	0.24
Control Delay	14.5	25.8	2.2	2.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.5	25.8	2.2	2.3
Queue Length 50th (ft)	7	23	14	27
Queue Length 95th (ft)	43	59	30	50
Internal Link Dist (ft)	353	469	648	621
Turn Bay Length (ft)				
Base Capacity (vph)	524	484	2574	3828
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.18	0.14	0.24

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	5	15	5	20	5	370	15	10	835	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.955			0.934			0.994			0.999	
Flt Protected		0.984			0.981			0.999			0.999	
Satd. Flow (prot)	0	1750	0	0	1658	0	0	3350	0	0	5075	0
Flt Permitted		0.919			0.868			0.945			0.935	
Satd. Flow (perm)	0	1635	0	0	1467	0	0	3169	0	0	4750	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			22			10			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		469			670			701			646	
Travel Time (s)		10.7			15.2			15.9			14.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	6	6	6	17	6	22	6	411	17	11	928	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	45	0	0	434	0	0	945	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		6.9			6.9			66.0			66.0	
Actuated g/C Ratio		0.09			0.09			0.88			0.88	
v/c Ratio		0.12			0.29			0.16			0.23	
Control Delay		27.0			25.1			1.5			1.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		27.0			25.1			1.5			1.6	
LOS		C			C			A			A	
Approach Delay		27.0			25.1			1.5			1.6	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.1
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.29
Intersection Signal Delay: 2.6 — Intersection LOS: A
Intersection Capacity Utilization 33.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 48: Enterprise & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	18	45	434	945
v/c Ratio	0.12	0.29	0.16	0.23
Control Delay	27.0	25.1	1.5	1.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	27.0	25.1	1.5	1.6
Queue Length 50th (ft)	6	11	15	25
Queue Length 95th (ft)	23	38	30	43
Internal Link Dist (ft)	389	590	621	566
Turn Bay Length (ft)				
Base Capacity (vph)	463	428	2784	4172
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.11	0.16	0.23

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	45	45	30	95	25	45	315	40	30	745	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.951			0.977			0.985			0.978	
Flt Protected		0.986			0.990			0.994			0.998	
Satd. Flow (prot)	0	1681	0	0	1686	0	0	3273	0	0	4915	0
Flt Permitted		0.847			0.926			0.790			0.916	
Satd. Flow (perm)	0	1444	0	0	1577	0	0	2601	0	0	4511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			12			29			85	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		680			925			646			1583	
Travel Time (s)		15.5			21.0			14.7			36.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	9%	9%	9%	8%	8%	8%	3%	3%	3%
Adj. Flow (vph)	39	50	50	33	106	28	50	350	44	33	828	150
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	139	0	0	167	0	0	444	0	0	1011	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		12.6			12.6			54.1			54.1	
Actuated g/C Ratio		0.17			0.17			0.72			0.72	
v/c Ratio		0.51			0.61			0.23			0.31	
Control Delay		26.9			35.3			4.0			3.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.9			35.3			4.0			3.9	
LOS		C			D			A			A	
Approach Delay		26.9			35.3			4.0			3.9	
Approach LOS		C			D			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 74.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 8.7 — Intersection LOS: A
Intersection Capacity Utilization 50.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 50: Utica & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	139	167	444	1011
v/c Ratio	0.51	0.61	0.23	0.31
Control Delay	26.9	35.3	4.0	3.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.9	35.3	4.0	3.9
Queue Length 50th (ft)	42	63	25	42
Queue Length 95th (ft)	92	120	55	78
Internal Link Dist (ft)	600	845	566	1503
Turn Bay Length (ft)				
Base Capacity (vph)	431	453	1893	3292
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.37	0.23	0.31

Intersection Summary

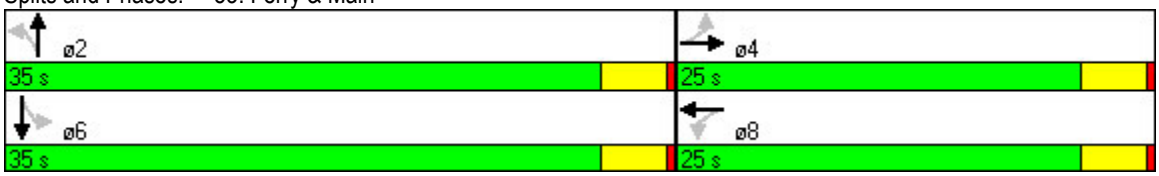
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	145	130	95	165	5	45	280	40	5	690	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.949			0.997			0.984			0.989	
Flt Protected		0.986			0.982			0.994				
Satd. Flow (prot)	0	3217	0	0	3303	0	0	3239	0	0	4981	0
Flt Permitted		0.782			0.675			0.822			0.938	
Satd. Flow (perm)	0	2551	0	0	2271	0	0	2679	0	0	4672	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		144			4			32			31	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1430			1674			1583			565	
Travel Time (s)		32.5			38.0			36.0			12.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	9%	9%	9%	3%	3%	3%
Adj. Flow (vph)	117	161	144	106	183	6	50	311	44	6	767	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	422	0	0	295	0	0	405	0	0	834	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		11.5			11.5			31.1			31.1	
Actuated g/C Ratio		0.23			0.23			0.61			0.61	
v/c Ratio		0.61			0.57			0.24			0.29	
Control Delay		15.2			21.6			5.1			5.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.2			21.6			5.1			5.1	
LOS		B			C			A			A	
Approach Delay		15.2			21.6			5.1			5.1	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 50.6
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 9.8 — Intersection LOS: A
Intersection Capacity Utilization 57.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 53: Ferry & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	422	295	405	834
v/c Ratio	0.61	0.57	0.24	0.29
Control Delay	15.2	21.6	5.1	5.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.2	21.6	5.1	5.1
Queue Length 50th (ft)	37	40	21	32
Queue Length 95th (ft)	72	71	50	66
Internal Link Dist (ft)	1350	1594	1503	485
Turn Bay Length (ft)				
Base Capacity (vph)	1147	949	1660	2885
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.31	0.24	0.29

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	0	260	25	0	5	695	190	25	5	315	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.895			0.976			0.996			0.956	
Flt Protected		0.989			0.960			0.963			0.999	
Satd. Flow (prot)	0	1649	0	0	1745	0	0	1787	0	0	1779	0
Flt Permitted		0.989			0.960			0.963			0.999	
Satd. Flow (perm)	0	1649	0	0	1745	0	0	1787	0	0	1779	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		281			150			363			330	
Travel Time (s)		6.4			3.4			8.3			7.5	
Peak Hour Factor	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)	83	0	289	28	0	6	772	211	28	6	350	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	372	0	0	34	0	0	1011	0	0	528	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 105.4%	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)	75	0	260	25	0	5	695	190	25	5	315	155
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	83	0	289	28	0	6	772	211	28	6	350	172
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								363			330	
pX, platoon unblocked	0.72	0.72	0.97	0.72	0.72	0.70	0.97			0.70		
vC, conflicting volume	2222	2231	436	2506	2303	225	522			239		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2423	2434	407	2817	2535	0	496			0		
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 %	0	100	54	0	100	99	26			100		
cM capacity (veh/h)	6	6	627	2	5	765	1040			1144		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	372	33	1011	528
Volume Left	83	28	772	6
Volume Right	289	6	28	172
cSH	27	2	1040	1144
Volume to Capacity	13.92	16.02	0.74	0.00
Queue Length 95th (ft)	Err	Err	178	0
Control Delay (s)	Err	Err	17.1	0.1
Lane LOS	F	F	C	A
Approach Delay (s)	Err	Err	17.1	0.1
Approach LOS	F	F		

Intersection Summary			
Average Delay	2094.5		
Intersection Capacity Utilization	105.4%	ICU Level of Service	G
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	20	10	5	465	160	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.955				0.996	
Flt Protected	0.968			0.999		
Satd. Flow (prot)	1722	0	0	1861	1855	0
Flt Permitted	0.968			0.999		
Satd. Flow (perm)	1722	0	0	1861	1855	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	326			293	365	
Travel Time (s)	7.4			6.7	8.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	11	6	517	178	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	0	0	523	184	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 38.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	10	5	465	160	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	22	11	6	517	178	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					365	
pX, platoon unblocked						
vC, conflicting volume	708	181	183			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	708	181	183			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	99	100			
cM capacity (veh/h)	399	862	1392			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	33	522	183
Volume Left	22	6	0
Volume Right	11	0	6
cSH	486	1392	1700
Volume to Capacity	0.07	0.00	0.11
Queue Length 95th (ft)	5	0	0
Control Delay (s)	12.9	0.1	0.0
Lane LOS	B	A	
Approach Delay (s)	12.9	0.1	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	53	162	220	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.988				
Satd. Flow (prot)	0	1840	1863	0	1863	0
Flt Permitted		0.988				
Satd. Flow (perm)	0	1840	1863	0	1863	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		173	169		105	
Travel Time (s)		3.9	3.8		2.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	59	180	244	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	239	244	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.7%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	53	162	220	0	0	0
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)	59	180	244	0	0	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)		466	169			
pX, platoon unblocked	0.95				0.95	0.95
vC, conflicting volume	244				542	244
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	180				493	180
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	96				100	100
cM capacity (veh/h)	1327				487	821

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	239	244	0
Volume Left	59	0	0
Volume Right	0	0	0
cSH	1327	1700	1700
Volume to Capacity	0.04	0.14	0.00
Queue Length 95th (ft)	3	0	0
Control Delay (s)	2.2	0.0	0.0
Lane LOS	A		A
Approach Delay (s)	2.2	0.0	0.0
Approach LOS			A

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations				↑↑↑↑	↖↖	
Volume (vph)	0	0	0	2210	710	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	6408	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	6408	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	339			382	585	
Travel Time (s)	7.7			8.7	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	2456	789	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	2456	789	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 86.6%		ICU Level of Service E	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	2210	710	0
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)	0	0	0	2456	789	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)	339			382		
pX, platoon unblocked					0.57	
vC, conflicting volume			0		614	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		0	0
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		0	100
cM capacity (veh/h)			1622		588	1084

Direction, Lane #	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	614	614	614	614	394	394
Volume Left	0	0	0	0	394	394
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	588	588
Volume to Capacity	0.36	0.36	0.36	0.36	0.67	0.67
Queue Length 95th (ft)	0	0	0	0	126	126
Control Delay (s)	0.0	0.0	0.0	0.0	22.7	22.7
Lane LOS					C	C
Approach Delay (s)	0.0				22.7	
Approach LOS					C	

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	125	2355	175	0	0	0	0	95	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.990						0.977	
Flt Protected					0.998							
Satd. Flow (prot)	0	0	0	0	6331	0	0	0	0	0	1820	0
Flt Permitted					0.998							
Satd. Flow (perm)	0	0	0	0	6331	0	0	0	0	0	1820	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					52						3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	139	2617	194	0	0	0	0	106	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2950	0	0	0	0	0	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.4	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.5	50.5						25.6	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.2	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.4	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					51.5						26.6	
Actuated g/C Ratio					0.61						0.31	
v/c Ratio					0.77						0.22	
Control Delay					13.8						22.4	
Queue Delay					0.0						0.0	
Total Delay					13.8						22.4	
LOS					B						C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					13.8						22.4	
Approach LOS					B						C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 55	
Control Type: Pretimed	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 51.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 66: Goodell & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	2950	128
v/c Ratio	0.77	0.22
Control Delay	13.8	22.4
Queue Delay	0.0	0.0
Total Delay	13.8	22.4
Queue Length 50th (ft)	301	49
Queue Length 95th (ft)	347	92
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3856	572
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.77	0.22

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	0	0	88	192	47	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.962	
Flt Protected				0.984		
Satd. Flow (prot)	1863	0	0	1833	1792	0
Flt Permitted				0.984		
Satd. Flow (perm)	1863	0	0	1833	1792	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	101			184	181	
Travel Time (s)	2.3			4.2	4.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	98	213	52	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	311	72	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 25.0%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	88	192	47	18
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	98	213	52	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)				184		
pX, platoon unblocked						
vC, conflicting volume	471	62	72			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	471	62	72			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	94			
cM capacity (veh/h)	516	1003	1528			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	0	311	72
Volume Left	0	98	0
Volume Right	0	0	20
cSH	1700	1528	1700
Volume to Capacity	0.00	0.06	0.04
Queue Length 95th (ft)	0	5	0
Control Delay (s)	0.0	2.7	0.0
Lane LOS	A	A	
Approach Delay (s)	0.0	2.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	25.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	155	15	45	105	5	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988				0.876	
Flt Protected				0.985	0.996	
Satd. Flow (prot)	1840	0	0	1835	1625	0
Flt Permitted				0.985	0.996	
Satd. Flow (perm)	1840	0	0	1835	1625	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	293			173	355	
Travel Time (s)	6.7			3.9	8.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	172	17	50	117	6	67
Shared Lane Traffic (%)						
Lane Group Flow (vph)	189	0	0	167	73	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	155	15	45	105	5	60
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)	172	17	50	117	6	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	293			342		
pX, platoon unblocked						
vC, conflicting volume			189		397	181
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			189		397	181
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		99	92
cM capacity (veh/h)			1385		586	862

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	189	167	72
Volume Left	0	50	6
Volume Right	17	0	67
cSH	1700	1385	832
Volume to Capacity	0.11	0.04	0.09
Queue Length 95th (ft)	0	3	7
Control Delay (s)	0.0	2.5	9.7
Lane LOS		A	A
Approach Delay (s)	0.0	2.5	9.7
Approach LOS			A

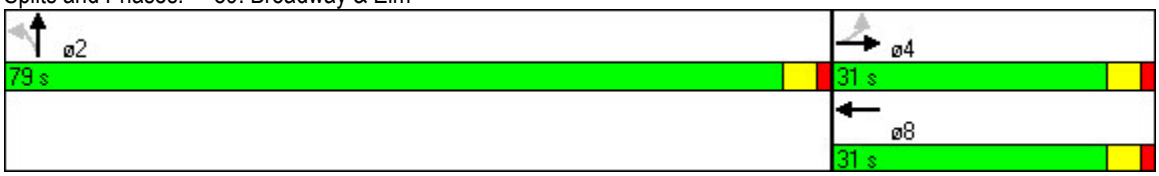
Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	70	0	0	230	25	140	2200	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.985			0.996				
Flt Protected		0.982						0.997				
Satd. Flow (prot)	0	3476	0	0	3486	0	0	5050	0	0	0	0
Flt Permitted		0.784						0.997				
Satd. Flow (perm)	0	2775	0	0	3486	0	0	5050	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					8			8				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			219			461			734	
Travel Time (s)		9.5			5.0			10.5			16.7	
Peak Hour Factor	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)	44	78	0	0	256	28	156	2444	67	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	284	0	0	2667	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	23.0	23.0			23.0		41.0	41.0				
Total Split (s)	31.0	31.0	0.0	0.0	31.0	0.0	79.0	79.0	0.0	0.0	0.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	0.0%	28.2%	0.0%	71.8%	71.8%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	26.3	26.3			26.3		74.3	74.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		27.3			27.3			75.3				
Actuated g/C Ratio		0.25			0.25			0.68				
v/c Ratio		0.18			0.33			0.77				
Control Delay		33.4			34.1			2.8				
Queue Delay		0.0			0.0			0.1				
Total Delay		33.4			34.1			2.9				
LOS		C			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		33.4			34.1			2.9				
Approach LOS		C			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 41 (37%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 67.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 89: Broadway & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	122	284	2667
v/c Ratio	0.18	0.33	0.77
Control Delay	33.4	34.1	2.8
Queue Delay	0.0	0.0	0.1
Total Delay	33.4	34.1	2.9
Queue Length 50th (ft)	35	84	39
Queue Length 95th (ft)	61	123	54
Internal Link Dist (ft)	339	139	381
Turn Bay Length (ft)			
Base Capacity (vph)	689	871	3459
Starvation Cap Reductn	0	0	144
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.18	0.33	0.80

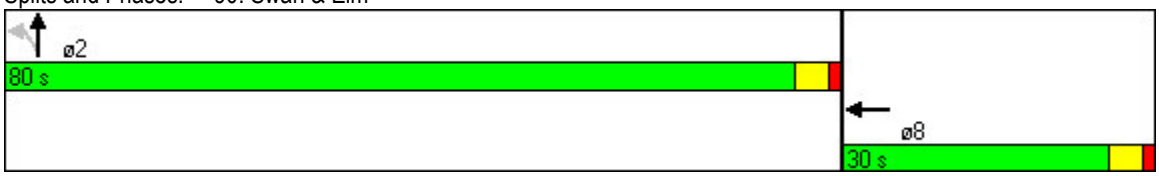
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	200	105	495	2985	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.91	1.00	1.00	1.00
Frt					0.957			0.998				
Flt Protected							0.950	0.999				
Satd. Flow (prot)	0	0	0	0	1818	0	1552	4887	0	0	0	0
Flt Permitted							0.950	0.999				
Satd. Flow (perm)	0	0	0	0	1818	0	1552	4887	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					1		250	10				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			208			801			316	
Travel Time (s)		8.2			4.7			18.2			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.71	0.81	0.76	0.81	0.88	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	0	0	282	130	651	3685	62	0	0	0
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	0	0	0	0	412	0	586	3812	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					21.2		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	80.0	80.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	27.3%	0.0%	72.7%	72.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		75.4	75.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					20		22	22				
Act Effct Green (s)					27.4		77.4	77.4				
Actuated g/C Ratio					0.25		0.70	0.70				
v/c Ratio					0.91		0.50	1.11				
Control Delay					65.5		5.5	71.8				
Queue Delay					0.0		0.0	4.0				
Total Delay					65.5		5.5	75.8				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					E		A	E				
Approach Delay					65.5			66.4				
Approach LOS					E			E				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green, Master Intersection	
Natural Cycle: 130	
Control Type: Pretimed	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 66.4	Intersection LOS: E
Intersection Capacity Utilization 75.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 90: Swan & Elm



Lane Group	WBT	NBL	NBT
Lane Group Flow (vph)	412	586	3812
v/c Ratio	0.91	0.50	1.11
Control Delay	65.5	5.5	71.8
Queue Delay	0.0	0.0	4.0
Total Delay	65.5	5.5	75.8
Queue Length 50th (ft)	283	96	~1196
Queue Length 95th (ft)	297	111	#1049
Internal Link Dist (ft)	128		721
Turn Bay Length (ft)			
Base Capacity (vph)	454	1166	3442
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	28
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.91	0.50	1.12

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	80	0	60	270	0	0	0	0	50	1845	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt											0.977	
Flt Protected					0.991						0.999	
Satd. Flow (prot)	0	3539	0	0	3507	0	0	0	0	0	4963	0
Flt Permitted					0.884						0.999	
Satd. Flow (perm)	0	3539	0	0	3129	0	0	0	0	0	4963	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											72	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			419			255			685	
Travel Time (s)		5.1			9.5			5.8			15.6	
Peak Hour Factor	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)	0	89	0	67	300	0	0	0	0	56	2050	372
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	367	0	0	0	0	0	2478	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		24.0		24.0	24.0					41.0	41.0	
Total Split (s)	0.0	31.0	0.0	31.0	31.0	0.0	0.0	0.0	0.0	49.0	49.0	0.0
Total Split (%)	0.0%	38.8%	0.0%	38.8%	38.8%	0.0%	0.0%	0.0%	0.0%	61.3%	61.3%	0.0%
Maximum Green (s)		26.3		26.3	26.3					44.3	44.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		27.3			27.3						45.3	
Actuated g/C Ratio		0.34			0.34						0.57	
v/c Ratio		0.07			0.34						0.87	
Control Delay		18.1			20.8						9.0	
Queue Delay		0.0			0.0						0.0	
Total Delay		18.1			20.8						9.0	
LOS		B			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.1			20.8						9.0	
Approach LOS		B			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 39 (49%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 10.7	Intersection LOS: B
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 91: Broadway & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	89	367	2478
v/c Ratio	0.07	0.34	0.87
Control Delay	18.1	20.8	9.0
Queue Delay	0.0	0.0	0.0
Total Delay	18.1	20.8	9.0
Queue Length 50th (ft)	15	71	90
Queue Length 95th (ft)	31	106	103
Internal Link Dist (ft)	146	339	605
Turn Bay Length (ft)			
Base Capacity (vph)	1208	1068	2842
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.07	0.34	0.87

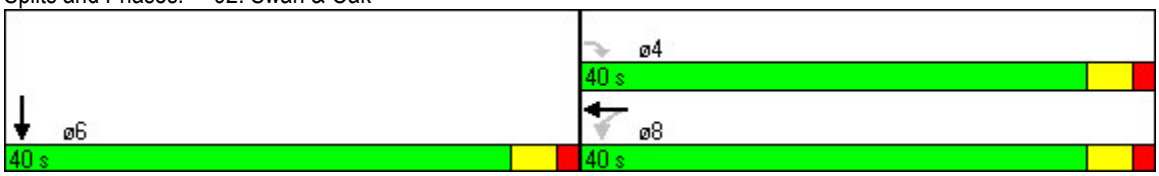
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	35	85	675	0	0	0	0	0	1150	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.86	0.86
Frt			0.850								0.993	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	2787	1770	3539	0	0	0	0	0	6363	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	2787	1770	3539	0	0	0	0	0	6363	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			41	24							17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			359			115			332	
Travel Time (s)		8.0			8.2			2.6			7.5	
Peak Hour Factor	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)	0	0	39	94	750	0	0	0	0	0	1278	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	39	94	750	0	0	0	0	0	1345	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			custom	Perm								
Protected Phases					8						6	
Permitted Phases			4	8								
Minimum Split (s)			20.8	20.8	20.8						40.0	
Total Split (s)	0.0	0.0	40.0	40.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Total Split (%)	0.0%	0.0%	50.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%
Maximum Green (s)			35.2	35.2	35.2						35.2	
Yellow Time (s)			3.2	3.2	3.2						3.2	
All-Red Time (s)			1.6	1.6	1.6						1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.8	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)			5.0	5.0	5.0						5.0	
Flash Dont Walk (s)			11.0	11.0	11.0						11.0	
Pedestrian Calls (#/hr)			0	0	0						0	
Act Effct Green (s)			36.2	36.2	36.2						36.2	
Actuated g/C Ratio			0.45	0.45	0.45						0.45	
v/c Ratio			0.03	0.12	0.47						0.47	
Control Delay			4.2	10.2	16.4						8.5	
Queue Delay			0.0	0.0	0.6						0.1	
Total Delay			4.2	10.2	17.1						8.6	
LOS			A	B	B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					16.3						8.6	
Approach LOS					B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 75 (94%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.47	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 75.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 92: Swan & Oak



Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	39	94	750	1345
v/c Ratio	0.03	0.12	0.47	0.47
Control Delay	4.2	10.2	16.4	8.5
Queue Delay	0.0	0.0	0.6	0.1
Total Delay	4.2	10.2	17.1	8.6
Queue Length 50th (ft)	0	19	131	41
Queue Length 95th (ft)	8	45	178	74
Internal Link Dist (ft)			279	252
Turn Bay Length (ft)				
Base Capacity (vph)	1284	814	1601	2889
Starvation Cap Reductn	0	0	467	290
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.03	0.12	0.66	0.52

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	65	45	40	185	0	0	0	0	50	2140	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.945									0.993	
Flt Protected					0.991						0.999	
Satd. Flow (prot)	0	1760	0	0	1846	0	0	0	0	0	5045	0
Flt Permitted					0.929						0.999	
Satd. Flow (perm)	0	1760	0	0	1730	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8									19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			458			685			413	
Travel Time (s)		10.0			10.4			15.6			9.4	
Peak Hour Factor	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)	0	72	50	44	206	0	0	0	0	56	2378	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	250	0	0	0	0	0	2551	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	23.0	0.0	23.0	23.0	0.0	0.0	0.0	0.0	57.0	57.0	0.0
Total Split (%)	0.0%	28.8%	0.0%	28.8%	28.8%	0.0%	0.0%	0.0%	0.0%	71.3%	71.3%	0.0%
Maximum Green (s)		18.3		18.3	18.3					52.3	52.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		19.3			19.3						53.3	
Actuated g/C Ratio		0.24			0.24						0.67	
v/c Ratio		0.28			0.60						0.76	
Control Delay		25.2			33.9						6.1	
Queue Delay		0.0			0.0						0.0	
Total Delay		25.2			33.9						6.1	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		25.2			33.9						6.1	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 29 (36%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 9.2	Intersection LOS: A
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 93: Huron & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	122	250	2551
v/c Ratio	0.28	0.60	0.76
Control Delay	25.2	33.9	6.1
Queue Delay	0.0	0.0	0.0
Total Delay	25.2	33.9	6.1
Queue Length 50th (ft)	46	111	41
Queue Length 95th (ft)	92	186	45
Internal Link Dist (ft)	360	378	333
Turn Bay Length (ft)			
Base Capacity (vph)	431	417	3368
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.28	0.60	0.76

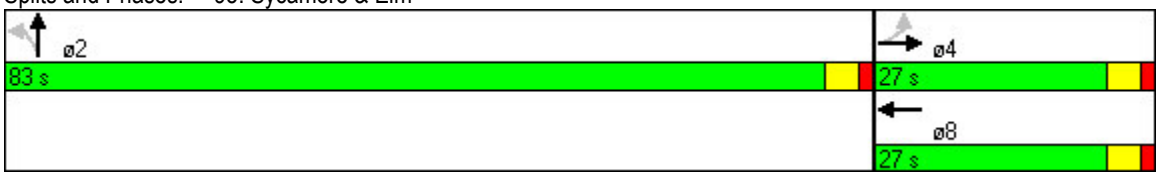
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	45	0	0	105	15	105	2115	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.983			0.997				
Flt Protected		0.977						0.998				
Satd. Flow (prot)	0	1820	0	0	1831	0	0	5060	0	0	0	0
Flt Permitted		0.824						0.998				
Satd. Flow (perm)	0	1535	0	0	1831	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					6			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		458			237			734			371	
Travel Time (s)		10.4			5.4			16.7			8.4	
Peak Hour Factor	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)	44	50	0	0	117	17	117	2350	50	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	94	0	0	134	0	0	2517	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.7	20.7			20.7		45.0	45.0				
Total Split (s)	27.0	27.0	0.0	0.0	27.0	0.0	83.0	83.0	0.0	0.0	0.0	0.0
Total Split (%)	24.5%	24.5%	0.0%	0.0%	24.5%	0.0%	75.5%	75.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	22.3	22.3			22.3		78.3	78.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		23.3			23.3			79.3				
Actuated g/C Ratio		0.21			0.21			0.72				
v/c Ratio		0.29			0.34			0.69				
Control Delay		39.3			38.0			2.7				
Queue Delay		0.0			0.0			0.3				
Total Delay		39.3			38.0			3.0				
LOS		D			D			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		39.3			38.0			3.0				
Approach LOS		D			D			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 64 (58%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 6.0	Intersection LOS: A
Intersection Capacity Utilization 61.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 95: Sycamore & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	94	134	2517
v/c Ratio	0.29	0.34	0.69
Control Delay	39.3	38.0	2.7
Queue Delay	0.0	0.0	0.3
Total Delay	39.3	38.0	3.0
Queue Length 50th (ft)	56	77	41
Queue Length 95th (ft)	105	135	71
Internal Link Dist (ft)	378	157	654
Turn Bay Length (ft)			
Base Capacity (vph)	325	393	3650
Starvation Cap Reductn	0	0	493
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.29	0.34	0.80

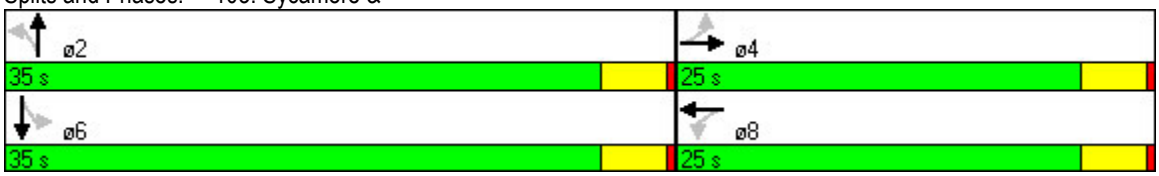
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	45	15	15	65	25	30	565	25	15	270	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.976			0.968			0.994			0.990	
Flt Protected		0.985			0.993			0.998			0.997	
Satd. Flow (prot)	0	1723	0	0	1691	0	0	3477	0	0	3394	0
Flt Permitted		0.915			0.964			0.929			0.919	
Satd. Flow (perm)	0	1601	0	0	1642	0	0	3236	0	0	3128	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			28			10			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		245			600			803			878	
Travel Time (s)		5.6			13.6			18.3			20.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	8%	8%	8%	3%	3%	3%	5%	5%	5%
Adj. Flow (vph)	28	50	17	17	72	28	33	628	28	17	300	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	117	0	0	689	0	0	339	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.17			0.20			0.41			0.21	
Control Delay		12.5			11.8			7.3			7.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.5			11.8			7.3			7.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		12.5			11.8			7.3			7.8	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 44.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: Sycamore &



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	95	117	689	339
v/c Ratio	0.17	0.20	0.41	0.21
Control Delay	12.5	11.8	7.3	7.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.5	11.8	7.3	7.8
Queue Length 50th (ft)	19	22	53	30
Queue Length 95th (ft)	47	53	70	50
Internal Link Dist (ft)	165	520	723	798
Turn Bay Length (ft)				
Base Capacity (vph)	571	593	1677	1625
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.20	0.41	0.21

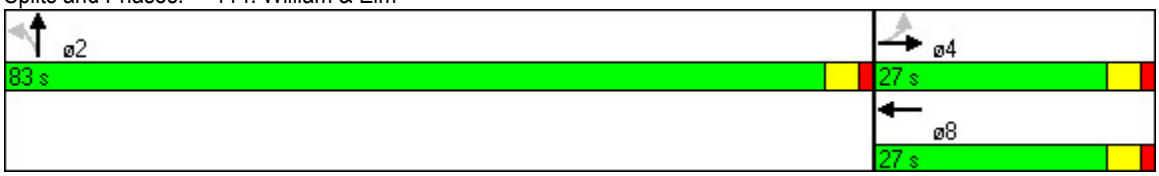
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	55	0	0	200	35	165	2375	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.978			0.999				
Flt Protected		0.996						0.997				
Satd. Flow (prot)	0	3525	0	0	3461	0	0	5065	0	0	0	0
Flt Permitted		0.927						0.997				
Satd. Flow (perm)	0	3281	0	0	3461	0	0	5065	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					7			3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		371			191			308			461	
Travel Time (s)		8.4			4.3			7.0			10.5	
Peak Hour Factor	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)	6	61	0	0	222	39	183	2639	22	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	67	0	0	261	0	0	2844	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	27.0	27.0	0.0	0.0	27.0	0.0	83.0	83.0	0.0	0.0	0.0	0.0
Total Split (%)	24.5%	24.5%	0.0%	0.0%	24.5%	0.0%	75.5%	75.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	22.3	22.3			22.3		78.3	78.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		23.3			23.3			79.3				
Actuated g/C Ratio		0.21			0.21			0.72				
v/c Ratio		0.10			0.35			0.78				
Control Delay		35.4			37.5			2.6				
Queue Delay		0.0			0.0			0.3				
Total Delay		35.4			37.5			2.9				
LOS		D			D			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.4			37.5			2.9				
Approach LOS		D			D			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 35 (32%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 63.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 114: William & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	67	261	2844
v/c Ratio	0.10	0.35	0.78
Control Delay	35.4	37.5	2.6
Queue Delay	0.0	0.0	0.3
Total Delay	35.4	37.5	2.9
Queue Length 50th (ft)	20	81	29
Queue Length 95th (ft)	40	120	32
Internal Link Dist (ft)	291	111	228
Turn Bay Length (ft)			
Base Capacity (vph)	695	739	3652
Starvation Cap Reductn	0	0	266
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.10	0.35	0.84

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	35	10	40	250	0	0	0	0	80	1875	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.967										
Flt Protected					0.993						0.998	
Satd. Flow (prot)	0	3422	0	0	3514	0	0	0	0	0	5075	0
Flt Permitted					0.911						0.998	
Satd. Flow (perm)	0	3422	0	0	3224	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		507			371			297			255	
Travel Time (s)		11.5			8.4			6.8			5.8	
Peak Hour Factor	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)	0	39	11	44	278	0	0	0	0	89	2083	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	322	0	0	0	0	0	2178	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	25.0	0.0	25.0	25.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	31.3%	0.0%	31.3%	31.3%	0.0%	0.0%	0.0%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)		20.3		20.3	20.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		21.3			21.3						51.3	
Actuated g/C Ratio		0.27			0.27						0.64	
v/c Ratio		0.05			0.38						0.67	
Control Delay		18.4			25.5						1.6	
Queue Delay		0.0			0.0						0.9	
Total Delay		18.4			25.5						2.5	
LOS		B			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.4			25.5						2.5	
Approach LOS		B			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 45 (56%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 56.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 115: William & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	50	322	2178
v/c Ratio	0.05	0.38	0.67
Control Delay	18.4	25.5	1.6
Queue Delay	0.0	0.0	0.9
Total Delay	18.4	25.5	2.5
Queue Length 50th (ft)	7	68	17
Queue Length 95th (ft)	20	105	20
Internal Link Dist (ft)	427	291	175
Turn Bay Length (ft)			
Base Capacity (vph)	919	858	3255
Starvation Cap Reductn	0	0	708
Spillback Cap Reductn	0	0	21
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.05	0.38	0.86

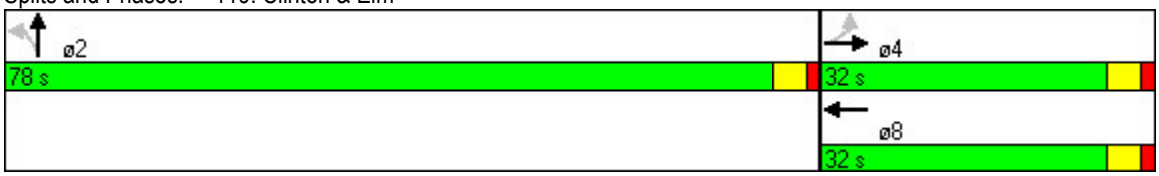
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	90	0	0	95	40	20	2540	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.951			0.997				
Flt Protected		0.988						0.999				
Satd. Flow (prot)	0	1836	0	0	1807	0	0	5021	0	0	0	0
Flt Permitted		0.894						0.999				
Satd. Flow (perm)	0	1661	0	0	1807	0	0	5021	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			191			734			308	
Travel Time (s)		8.2			4.3			16.7			7.0	
Peak Hour Factor	0.68	0.78	0.90	0.90	0.73	0.54	0.58	0.94	0.58	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	2%	2%	0%	0%	0%	3%	0%	2%	2%	2%
Adj. Flow (vph)	37	115	0	0	130	74	34	2702	60	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	0	0	204	0	0	2796	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.2	21.2			21.2		48.0	48.0				
Total Split (s)	32.0	32.0	0.0	0.0	32.0	0.0	78.0	78.0	0.0	0.0	0.0	0.0
Total Split (%)	29.1%	29.1%	0.0%	0.0%	29.1%	0.0%	70.9%	70.9%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	27.3	27.3			27.3		73.3	73.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.7	2.7	3.0	3.0	2.7	3.0	2.7	2.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			75.3				
Actuated g/C Ratio		0.27			0.27			0.68				
v/c Ratio		0.34			0.42			0.81				
Control Delay		35.3			35.7			2.4				
Queue Delay		0.0			0.0			0.2				
Total Delay		35.3			35.7			2.6				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D			D			A				
Approach Delay		35.3			35.7			2.6				
Approach LOS		D			D			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 28 (25%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 6.3	Intersection LOS: A
Intersection Capacity Utilization 73.8%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 119: Clinton & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	152	204	2796
v/c Ratio	0.34	0.42	0.81
Control Delay	35.3	35.7	2.4
Queue Delay	0.0	0.0	0.2
Total Delay	35.3	35.7	2.6
Queue Length 50th (ft)	87	116	25
Queue Length 95th (ft)	124	145	26
Internal Link Dist (ft)	279	111	654
Turn Bay Length (ft)			
Base Capacity (vph)	442	485	3439
Starvation Cap Reductn	0	0	133
Spillback Cap Reductn	0	0	84
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.34	0.42	0.85

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	80	40	30	120	0	0	0	0	45	1775	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.955									0.993	
Flt Protected					0.990						0.999	
Satd. Flow (prot)	0	1779	0	0	1844	0	0	0	0	0	5045	0
Flt Permitted					0.932						0.999	
Satd. Flow (perm)	0	1779	0	0	1736	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8									15	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		520			359			762			297	
Travel Time (s)		11.8			8.2			17.3			6.8	
Peak Hour Factor	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)	0	89	44	33	133	0	0	0	0	50	1972	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	166	0	0	0	0	0	2122	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					48.0	48.0	
Total Split (s)	0.0	32.0	0.0	32.0	32.0	0.0	0.0	0.0	0.0	48.0	48.0	0.0
Total Split (%)	0.0%	40.0%	0.0%	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	60.0%	60.0%	0.0%
Maximum Green (s)		27.3		27.3	27.3					43.3	43.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		28.3			28.3						44.3	
Actuated g/C Ratio		0.35			0.35						0.55	
v/c Ratio		0.21			0.27						0.76	
Control Delay		18.0			20.0						3.0	
Queue Delay		0.0			0.0						0.1	
Total Delay		18.0			20.0						3.1	
LOS		B			B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		18.0			20.0						3.1	
Approach LOS		B			B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 53 (66%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 58.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 120: Clinton & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	133	166	2122
v/c Ratio	0.21	0.27	0.76
Control Delay	18.0	20.0	3.0
Queue Delay	0.0	0.0	0.1
Total Delay	18.0	20.0	3.1
Queue Length 50th (ft)	43	58	13
Queue Length 95th (ft)	82	105	13
Internal Link Dist (ft)	440	279	217
Turn Bay Length (ft)			
Base Capacity (vph)	634	614	2800
Starvation Cap Reductn	0	0	72
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.21	0.27	0.78

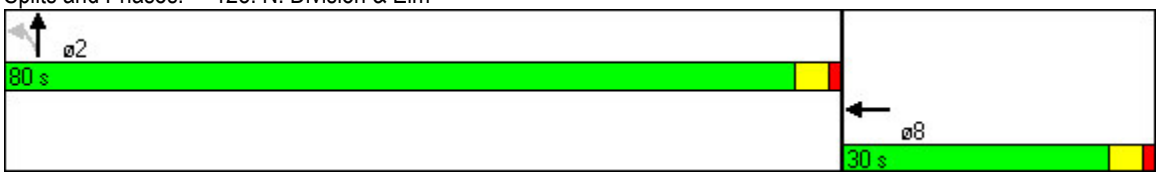
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	110	50	465	2410	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.953							
Flt Protected								0.992				
Satd. Flow (prot)	0	0	0	0	3373	0	0	5045	0	0	0	0
Flt Permitted								0.992				
Satd. Flow (perm)	0	0	0	0	3373	0	0	5045	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					5			85				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		349			195			317			734	
Travel Time (s)		7.9			4.4			7.2			16.7	
Peak Hour Factor	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)	0	0	0	0	122	56	517	2678	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	178	0	0	3195	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					20.6		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	80.0	80.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	27.3%	0.0%	72.7%	72.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		75.4	75.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					26.4			76.4				
Actuated g/C Ratio					0.24			0.69				
v/c Ratio					0.22			0.91				
Control Delay					33.4			7.5				
Queue Delay					0.0			3.5				
Total Delay					33.4			11.1				
LOS					C			B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					33.4			11.1				
Approach LOS					C			B				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 10 (9%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 12.2	Intersection LOS: B
Intersection Capacity Utilization 67.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 128: N. Division & Elm



Lane Group	WBT	NBT
Lane Group Flow (vph)	178	3195
v/c Ratio	0.22	0.91
Control Delay	33.4	7.5
Queue Delay	0.0	3.5
Total Delay	33.4	11.1
Queue Length 50th (ft)	51	104
Queue Length 95th (ft)	83	256
Internal Link Dist (ft)	115	237
Turn Bay Length (ft)		
Base Capacity (vph)	813	3530
Starvation Cap Reductn	0	264
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.22	0.98

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	20	430	0	0	0	0	0	1280	370
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.966	
Flt Protected					0.998							
Satd. Flow (prot)	0	0	0	0	5075	0	0	0	0	0	4912	0
Flt Permitted					0.998							
Satd. Flow (perm)	0	0	0	0	5075	0	0	0	0	0	4912	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					10						142	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			349			277			762	
Travel Time (s)		8.2			7.9			6.3			17.3	
Peak Hour Factor	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)	0	0	0	22	478	0	0	0	0	0	1422	411
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	500	0	0	0	0	0	1833	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.7	20.7						47.0	
Total Split (s)	0.0	0.0	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	47.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	41.3%	41.3%	0.0%	0.0%	0.0%	0.0%	0.0%	58.8%	0.0%
Maximum Green (s)				28.3	28.3						42.3	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.5	1.5						1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					29.3						43.3	
Actuated g/C Ratio					0.37						0.54	
v/c Ratio					0.27						0.67	
Control Delay					17.9						2.5	
Queue Delay					0.0						0.0	
Total Delay					17.9						2.5	
LOS					B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					17.9						2.5	
Approach LOS					B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 68 (85%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 5.8	Intersection LOS: A
Intersection Capacity Utilization 48.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 129: N. Division & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	500	1833
v/c Ratio	0.27	0.67
Control Delay	17.9	2.5
Queue Delay	0.0	0.0
Total Delay	17.9	2.5
Queue Length 50th (ft)	61	0
Queue Length 95th (ft)	86	21
Internal Link Dist (ft)	269	682
Turn Bay Length (ft)		
Base Capacity (vph)	1865	2724
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.27	0.67

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	185	195	0	0	0	0	0	2990	40	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.998				
Flt Protected	0.950	0.988										
Satd. Flow (prot)	1610	3350	0	0	0	0	0	5075	0	0	0	0
Flt Permitted	0.950	0.988										
Satd. Flow (perm)	1610	3350	0	0	0	0	0	5075	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	2	2						5				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			206			316			317	
Travel Time (s)		7.8			4.7			7.2			7.2	
Peak Hour Factor	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)	206	217	0	0	0	0	0	3322	44	0	0	0
Shared Lane Traffic (%)	33%											
Lane Group Flow (vph)	138	285	0	0	0	0	0	3366	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	21.0	21.0						50.0				
Total Split (s)	23.0	23.0	0.0	0.0	0.0	0.0	0.0	87.0	0.0	0.0	0.0	0.0
Total Split (%)	20.9%	20.9%	0.0%	0.0%	0.0%	0.0%	0.0%	79.1%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	18.4	18.4						82.4				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	1.4	1.4						1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	19.4	19.4						83.4				
Actuated g/C Ratio	0.18	0.18						0.76				
v/c Ratio	0.48	0.48						0.87				
Control Delay	46.6	43.6						1.4				
Queue Delay	0.0	0.0						31.9				
Total Delay	46.6	43.6						33.3				
LOS	D	D						C				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		44.6						33.3				
Approach LOS		D						C				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 6 (5%), Referenced to phase 2:NBT, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 34.6	Intersection LOS: C
Intersection Capacity Utilization 92.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 135: S Division & Elm

Lane Group	EBL	EBT	NBT
Lane Group Flow (vph)	138	285	3366
v/c Ratio	0.48	0.48	0.87
Control Delay	46.6	43.6	1.4
Queue Delay	0.0	0.0	31.9
Total Delay	46.6	43.6	33.3
Queue Length 50th (ft)	95	100	28
Queue Length 95th (ft)	165	146	m24
Internal Link Dist (ft)		265	236
Turn Bay Length (ft)			
Base Capacity (vph)	286	592	3849
Starvation Cap Reductn	0	0	696
Spillback Cap Reductn	0	0	101
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.48	0.48	1.07

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	215	75	0	0	0	0	0	0	165	1140	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									
Flt Protected											0.994	
Satd. Flow (prot)	0	5085	1583	0	0	0	0	0	0	0	6369	0
Flt Permitted											0.994	
Satd. Flow (perm)	0	5085	1583	0	0	0	0	0	0	0	6369	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			47								71	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		208			345			332			277	
Travel Time (s)		4.7			7.8			7.5			6.3	
Peak Hour Factor	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)	0	239	83	0	0	0	0	0	0	183	1267	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	239	83	0	0	0	0	0	0	0	1450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		20.8	20.8							47.0	47.0	
Total Split (s)	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	47.0	47.0	0.0
Total Split (%)	0.0%	41.3%	41.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%
Maximum Green (s)		28.2	28.2							42.2	42.2	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.6	1.6							1.6	1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.0	3.8	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		29.2	29.2								43.2	
Actuated g/C Ratio		0.36	0.36								0.54	
v/c Ratio		0.13	0.14								0.42	
Control Delay		17.2	9.6								1.5	
Queue Delay		0.0	0.0								0.1	
Total Delay		17.2	9.6								1.7	
LOS		B	A								A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		15.2									1.7	
Approach LOS		B									A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 73 (91%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.42	
Intersection Signal Delay: 4.2	Intersection LOS: A
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 136: S Division & Oak

Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	239	83	1450
v/c Ratio	0.13	0.14	0.42
Control Delay	17.2	9.6	1.5
Queue Delay	0.0	0.0	0.1
Total Delay	17.2	9.6	1.7
Queue Length 50th (ft)	28	12	9
Queue Length 95th (ft)	45	40	13
Internal Link Dist (ft)	128		197
Turn Bay Length (ft)			
Base Capacity (vph)	1856	608	3472
Starvation Cap Reductn	0	0	865
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.13	0.14	0.56

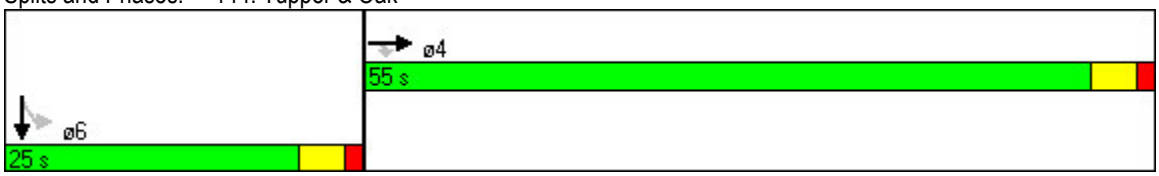
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	465	150	0	0	0	0	0	0	30	160	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									
Flt Protected											0.992	
Satd. Flow (prot)	0	3539	1583	0	0	0	0	0	0	0	3511	0
Flt Permitted											0.992	
Satd. Flow (perm)	0	3539	1583	0	0	0	0	0	0	0	3511	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			167								26	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		351			380			611			685	
Travel Time (s)		8.0			8.6			13.9			15.6	
Peak Hour Factor	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)	0	517	167	0	0	0	0	0	0	33	178	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	517	167	0	0	0	0	0	0	0	211	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		45.0	45.0							20.6	20.6	
Total Split (s)	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0
Total Split (%)	0.0%	68.8%	68.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%	31.3%	0.0%
Maximum Green (s)		50.4	50.4							20.4	20.4	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.4	1.4							1.4	1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		51.4	51.4								21.4	
Actuated g/C Ratio		0.64	0.64								0.27	
v/c Ratio		0.23	0.16								0.22	
Control Delay		3.4	0.6								20.6	
Queue Delay		0.0	0.0								0.0	
Total Delay		3.4	0.6								20.6	
LOS		A	A								C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.8									20.6	
Approach LOS		A									C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 52 (65%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 39.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 144: Tupper & Oak



Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	517	167	211
v/c Ratio	0.23	0.16	0.22
Control Delay	3.4	0.6	20.6
Queue Delay	0.0	0.0	0.0
Total Delay	3.4	0.6	20.6
Queue Length 50th (ft)	15	0	37
Queue Length 95th (ft)	23	0	64
Internal Link Dist (ft)	271		605
Turn Bay Length (ft)			
Base Capacity (vph)	2274	1077	958
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.23	0.16	0.22

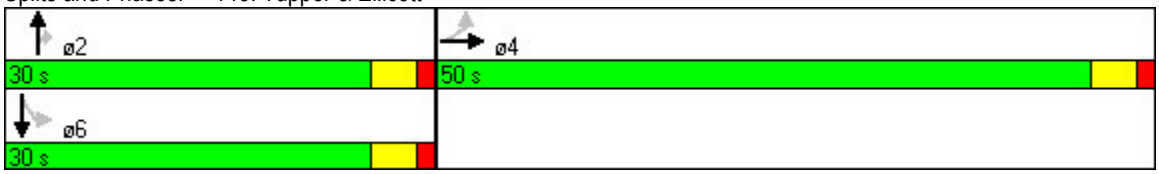
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	60	600	45	0	0	0	0	255	55	65	100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor		1.00										
Frt		0.985						0.996	0.850			
Flt Protected		0.994									0.984	
Satd. Flow (prot)	0	4969	0	0	0	0	0	1746	1504	0	2651	0
Flt Permitted		0.994									0.708	
Satd. Flow (perm)	0	4967	0	0	0	0	0	1746	1504	0	1907	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		40						2	74			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	120	714	90	0	0	0	0	290	82	94	200	0
Shared Lane Traffic (%)									10%			
Lane Group Flow (vph)	0	924	0	0	0	0	0	298	74	0	294	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	50.0	50.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	37.5%	37.5%	37.5%	0.0%
Maximum Green (s)	45.4	45.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		47.4						27.4	27.4		27.4	
Actuated g/C Ratio		0.59						0.34	0.34		0.34	
v/c Ratio		0.31						0.50	0.13		0.45	
Control Delay		7.0						24.2	5.6		18.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0						0.0	0.0		0.0	
Total Delay		7.0						24.2	5.6		18.5	
LOS		A						C	A		B	
Approach Delay		7.0						20.5			18.5	
Approach LOS		A						C			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 41 (51%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 43.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 145: Tupper & Ellicott



Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	924	298	74	294
v/c Ratio	0.31	0.50	0.13	0.45
Control Delay	7.0	24.2	5.6	18.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.0	24.2	5.6	18.5
Queue Length 50th (ft)	48	121	0	46
Queue Length 95th (ft)	60	192	13	43
Internal Link Dist (ft)	262	271		652
Turn Bay Length (ft)				
Base Capacity (vph)	2959	599	564	653
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.50	0.13	0.45

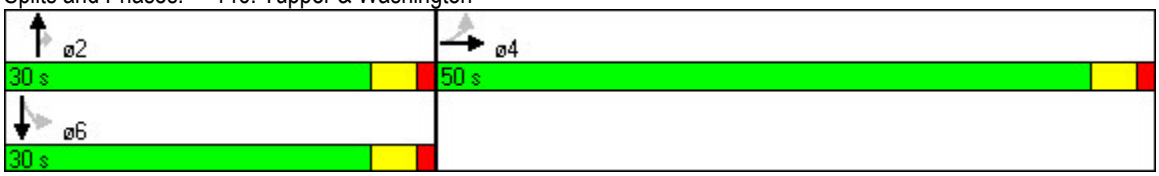
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	415	105	0	0	0	0	135	50	80	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.964							0.850			
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	4955	0	0	0	0	0	1900	1615	1787	1863	0
Flt Permitted		0.998								0.583		
Satd. Flow (perm)	0	4955	0	0	0	0	0	1900	1615	1097	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		157							53			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			342			356			718	
Travel Time (s)		6.5			7.8			8.1			16.3	
Peak Hour Factor	0.50	0.90	0.67	0.90	0.90	0.90	0.90	0.80	0.94	0.76	0.73	0.90
Heavy Vehicles (%)	0%	1%	0%	2%	2%	2%	2%	0%	0%	1%	2%	2%
Adj. Flow (vph)	30	461	157	0	0	0	0	169	53	105	274	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	648	0	0	0	0	0	169	53	105	274	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	50.0	50.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	0.0%	0.0%	0.0%	37.5%	37.5%	37.5%	37.5%	0.0%
Maximum Green (s)	45.4	45.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	3.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		47.4						27.4	26.4	27.4	27.4	
Actuated g/C Ratio		0.59						0.34	0.33	0.34	0.34	
v/c Ratio		0.22						0.26	0.09	0.28	0.43	
Control Delay		0.3						20.4	6.3	26.5	28.1	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		0.3						20.4	6.3	26.5	28.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A						C	A	C	C	
Approach Delay		0.3						17.0			27.6	
Approach LOS		A						B			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 34 (43%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 11.5	Intersection LOS: B
Intersection Capacity Utilization 32.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 146: Tupper & Washington



Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	648	169	53	105	274
v/c Ratio	0.22	0.26	0.09	0.28	0.43
Control Delay	0.3	20.4	6.3	26.5	28.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.3	20.4	6.3	26.5	28.1
Queue Length 50th (ft)	0	60	0	43	118
Queue Length 95th (ft)	0	93	23	70	144
Internal Link Dist (ft)	208	276			638
Turn Bay Length (ft)					
Base Capacity (vph)	3000	651	568	376	638
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.26	0.09	0.28	0.43

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	480	0	0	0	0	0	725	5	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.999				
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3536	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3536	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								1				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		380			319			560			585	
Travel Time (s)		8.6			7.3			12.7			13.3	
Peak Hour Factor	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)	0	533	0	0	0	0	0	806	6	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	533	0	0	0	0	0	812	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type												
Protected Phases		4						2				
Permitted Phases												
Minimum Split (s)		45.0						21.2				
Total Split (s)	0.0	55.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	68.8%	0.0%	0.0%	0.0%	0.0%	0.0%	31.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)		49.8						19.8				
Yellow Time (s)		3.2						3.2				
All-Red Time (s)		2.0						2.0				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.2	3.0	3.0	3.0	3.0	3.0	4.2	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0						5.0				
Flash Dont Walk (s)		11.0						11.0				
Pedestrian Calls (#/hr)		0						0				
Act Effct Green (s)		50.8						20.8				
Actuated g/C Ratio		0.64						0.26				
v/c Ratio		0.24						0.88				
Control Delay		2.8						41.4				
Queue Delay		0.0						0.0				
Total Delay		2.8						41.4				
LOS		A						D				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		2.8						41.4				
Approach LOS		A						D				

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 52 (65%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 26.1	Intersection LOS: C
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 152: Tupper & Elm St

Lane Group	EBT	NBT
Lane Group Flow (vph)	533	812
v/c Ratio	0.24	0.88
Control Delay	2.8	41.4
Queue Delay	0.0	0.0
Total Delay	2.8	41.4
Queue Length 50th (ft)	17	204
Queue Length 95th (ft)	25	#308
Internal Link Dist (ft)	300	480
Turn Bay Length (ft)		
Base Capacity (vph)	2247	920
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.24	0.88

Intersection Summary

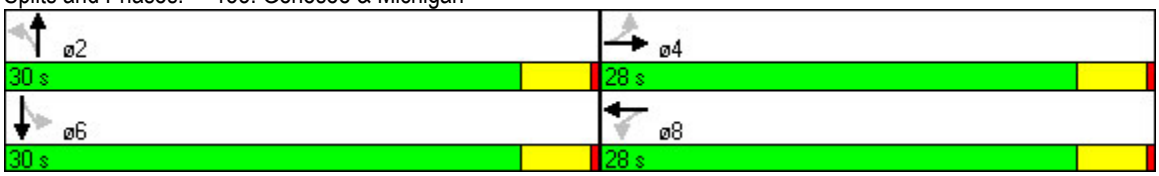
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	90	20	30	140	65	15	410	10	45	225	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.988			0.963			0.997			0.987	
Flt Protected		0.972			0.994			0.998			0.992	
Satd. Flow (prot)	0	3399	0	0	1783	0	0	3522	0	0	3465	0
Flt Permitted		0.698			0.942			0.941			0.851	
Satd. Flow (perm)	0	2441	0	0	1690	0	0	3320	0	0	2973	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			42			5			22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			1157			878			441	
Travel Time (s)		11.8			26.3			20.0			10.0	
Peak Hour Factor	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)	161	100	22	33	156	72	17	456	11	50	250	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	283	0	0	261	0	0	484	0	0	328	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	48.3%	48.3%	0.0%	48.3%	48.3%	0.0%	51.7%	51.7%	0.0%	51.7%	51.7%	0.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		25.0			25.0			27.0			27.0	
Actuated g/C Ratio		0.43			0.43			0.47			0.47	
v/c Ratio		0.27			0.35			0.31			0.23	
Control Delay		10.7			10.8			10.3			9.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.7			10.8			10.3			9.2	
LOS		B			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		10.7			10.8			10.3			9.2	
Approach LOS		B			B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 10.2	Intersection LOS: B
Intersection Capacity Utilization 54.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 155: Genesee & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	283	261	484	328
v/c Ratio	0.27	0.35	0.31	0.23
Control Delay	10.7	10.8	10.3	9.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.7	10.8	10.3	9.2
Queue Length 50th (ft)	29	47	51	31
Queue Length 95th (ft)	52	93	79	53
Internal Link Dist (ft)	438	1077	798	361
Turn Bay Length (ft)				
Base Capacity (vph)	1063	752	1548	1396
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.35	0.31	0.23

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	660	640	210	75	20	290	340	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	0.850
Flt Protected		0.974				0.986		
Satd. Flow (prot)	0	4951	1538	0	0	1736	2760	1509
Flt Permitted		0.974				0.986		
Satd. Flow (perm)	0	4951	1538	0	0	1736	2760	1509
Right Turn on Red								Yes
Satd. Flow (RTOR)								106
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	815	736	228	106	32	354	378	106
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	1551	228	0	0	492	378	106
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	custom
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	6
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	25.0
Total Split (s)	55.0	55.0	55.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	68.8%	68.8%	68.8%	31.3%	31.3%	31.3%	31.3%	31.3%
Maximum Green (s)	50.4	50.4	50.4	20.4	20.4	20.4	20.4	20.4
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	4.1
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
Act Effct Green (s)		50.4	50.4			20.9	20.9	20.9
Actuated g/C Ratio		0.63	0.63			0.26	0.26	0.26
v/c Ratio		0.50	0.24			1.08	0.52	0.22
Control Delay		5.7	5.3			100.9	28.4	6.5
Queue Delay		0.1	0.4			0.0	0.0	0.0
Total Delay		5.8	5.6			100.9	28.4	6.5

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		A	A			F	C	A
Approach Delay		5.8				100.9		
Approach LOS		A				F		

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 45 (56%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 25.9	Intersection LOS: C
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 159: Pearl & Main

Lane Group	WBT	WBR	NBT	SBR	SBR2
Lane Group Flow (vph)	1551	228	492	378	106
v/c Ratio	0.50	0.24	1.08	0.52	0.22
Control Delay	5.7	5.3	100.9	28.4	6.5
Queue Delay	0.1	0.4	0.0	0.0	0.0
Total Delay	5.8	5.6	100.9	28.4	6.5
Queue Length 50th (ft)	78	29	~284	92	0
Queue Length 95th (ft)	89	47	#405	138	15
Internal Link Dist (ft)	206		625		
Turn Bay Length (ft)					
Base Capacity (vph)	3119	969	454	721	473
Starvation Cap Reductn	476	367	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.38	1.08	0.52	0.22

Intersection Summary

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

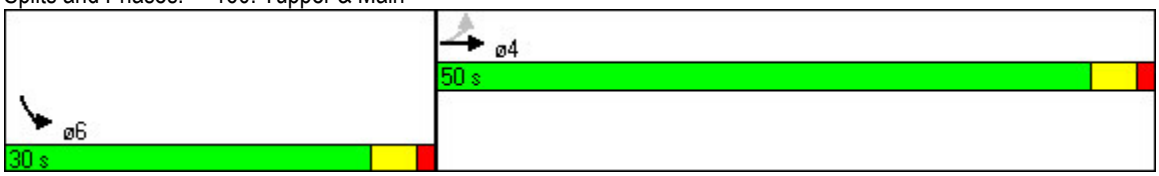
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	75	545	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.994				
Satd. Flow (prot)	0	5055	0	0	1863	0
Flt Permitted		0.994				
Satd. Flow (perm)	0	5055	0	0	1863	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		161	288		705	
Travel Time (s)		3.7	6.5		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	83	606	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	689	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm					
Protected Phases		4			6	
Permitted Phases	4					
Minimum Split (s)	40.0	40.0			20.6	
Total Split (s)	50.0	50.0	0.0	0.0	30.0	0.0
Total Split (%)	62.5%	62.5%	0.0%	0.0%	37.5%	0.0%
Maximum Green (s)	45.4	45.4			25.4	
Yellow Time (s)	3.2	3.2			3.2	
All-Red Time (s)	1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.6	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0	
Act Effct Green (s)		46.4				
Actuated g/C Ratio		0.58				
v/c Ratio		0.23				
Control Delay		8.4				
Queue Delay		0.0				
Total Delay		8.4				
LOS		A				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		8.4				
Approach LOS		A				

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 27 (34%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 8.4	Intersection LOS: A
Intersection Capacity Utilization 15.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 160: Tupper & Main



Lane Group	EBT
Lane Group Flow (vph)	689
v/c Ratio	0.23
Control Delay	8.4
Queue Delay	0.0
Total Delay	8.4
Queue Length 50th (ft)	56
Queue Length 95th (ft)	75
Internal Link Dist (ft)	81
Turn Bay Length (ft)	
Base Capacity (vph)	2932
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.23

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	160	2125	755	90	530	0	0	350	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.963						0.980	
Flt Protected					0.997		0.950					
Satd. Flow (prot)	0	0	0	0	6152	0	1770	1863	0	0	3468	0
Flt Permitted					0.997		0.239					
Satd. Flow (perm)	0	0	0	0	6152	0	445	1863	0	0	3468	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					139						18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	178	2361	839	100	589	0	0	389	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	3378	0	100	589	0	0	450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	15.0	50.0	0.0	0.0	20.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%	17.6%	58.8%	0.0%	0.0%	23.5%	0.0%
Maximum Green (s)				46.0	46.0		11.0				16.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

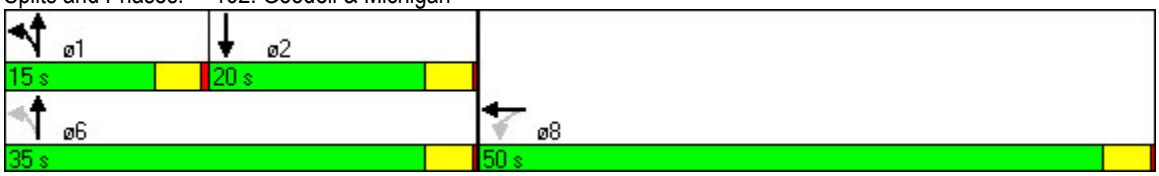
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	35.0
Total Split (%)	41%
Maximum Green (s)	31.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					47.0		32.0	32.0			17.0	
Actuated g/C Ratio					0.55		0.38	0.38			0.20	
v/c Ratio					0.98		0.28	0.84			0.64	
Control Delay					29.0		19.8	37.1			34.5	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					29.0		19.8	37.1			34.5	
LOS					C		B	D			C	
Approach Delay					29.0			34.6			34.5	
Approach LOS					C			C			C	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 30.4 — Intersection LOS: C
Intersection Capacity Utilization 80.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 162: Goodell & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	3378	100	589	450
v/c Ratio	0.98	0.28	0.84	0.64
Control Delay	29.0	19.8	37.1	34.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	29.0	19.8	37.1	34.5
Queue Length 50th (ft)	460	35	282	112
Queue Length 95th (ft)	#601	68	#465	162
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	3464	355	701	708
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.98	0.28	0.84	0.64

Intersection Summary

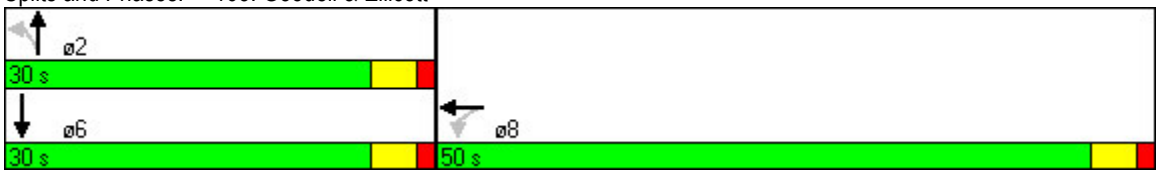
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	70	1710	500	50	195	0	0	120	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.99							
Frt					0.967						0.977	
Flt Protected					0.997			0.989				
Satd. Flow (prot)	0	0	0	0	6218	0	0	1862	0	0	1820	0
Flt Permitted					0.997			0.904				
Satd. Flow (perm)	0	0	0	0	6218	0	0	1702	0	0	1820	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					155						10	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		326			375			732			791	
Travel Time (s)		7.4			8.5			16.6			18.0	
Confl. Peds. (#/hr)						3						
Peak Hour Factor	0.90	0.90	0.90	0.50	0.85	0.83	0.78	0.88	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	1%	0%	4%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	140	2012	602	64	222	0	0	133	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	2754	0	0	286	0	0	161	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Minimum Split (s)				40.0	40.0		25.0	25.0			20.6	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	30.0	30.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	62.5%	62.5%	0.0%	37.5%	37.5%	0.0%	0.0%	37.5%	0.0%
Maximum Green (s)				45.4	45.4		25.4	25.4			25.4	
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)					47.4			27.4			26.4	
Actuated g/C Ratio					0.59			0.34			0.33	
v/c Ratio					0.73			0.49			0.27	
Control Delay					12.5			16.7			19.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					4.1			0.0			0.0	
Total Delay					16.6			16.7			19.9	
LOS					B			B			B	
Approach Delay					16.6			16.7			19.9	
Approach LOS					B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 46 (58%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 65.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 163: Goodell & Ellicott



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	2754	286	161
v/c Ratio	0.73	0.49	0.27
Control Delay	12.5	16.7	19.9
Queue Delay	4.1	0.0	0.0
Total Delay	16.6	16.7	19.9
Queue Length 50th (ft)	247	58	54
Queue Length 95th (ft)	261	99	101
Internal Link Dist (ft)	295	652	711
Turn Bay Length (ft)			
Base Capacity (vph)	3747	583	607
Starvation Cap Reductn	906	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.97	0.49	0.27

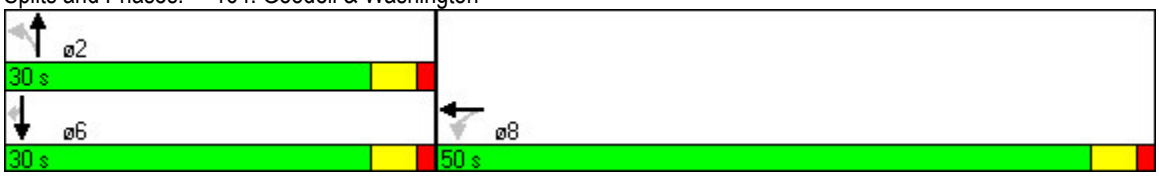
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	85	1000	45	60	180	0	0	110	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.994							0.850
Flt Protected					0.996			0.986				
Satd. Flow (prot)	0	0	0	0	6335	0	0	1787	0	0	1792	1429
Flt Permitted					0.996			0.884				
Satd. Flow (perm)	0	0	0	0	6335	0	0	1602	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					17							35
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	94	1124	50	80	200	0	0	126	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1268	0	0	280	0	0	126	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	30.0	30.0	0.0	0.0	30.0	30.0
Total Split (%)	0.0%	0.0%	0.0%	62.5%	62.5%	0.0%	37.5%	37.5%	0.0%	0.0%	37.5%	37.5%
Maximum Green (s)				45.4	45.4		25.4	25.4			25.4	25.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					47.4			27.4			27.4	27.4
Actuated g/C Ratio					0.59			0.34			0.34	0.34
v/c Ratio					0.34			0.51			0.21	0.07
Control Delay					1.5			17.0			19.8	7.0
Queue Delay					0.1			0.0			0.0	0.0
Total Delay					1.6			17.0			19.8	7.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			B			B	A
Approach Delay					1.6			17.0			17.0	
Approach LOS					A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 53 (66%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 5.6	Intersection LOS: A
Intersection Capacity Utilization 42.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 164: Goodell & Washington



Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	1268	280	126	35
v/c Ratio	0.34	0.51	0.21	0.07
Control Delay	1.5	17.0	19.8	7.0
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	1.6	17.0	19.8	7.0
Queue Length 50th (ft)	12	119	44	0
Queue Length 95th (ft)	13	196	80	7
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3760	549	614	512
Starvation Cap Reductn	1188	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.49	0.51	0.21	0.07

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	90	45	50	255	0	0	0	0	70	1885	350
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.950										0.850
Flt Protected					0.992						0.998	
Satd. Flow (prot)	0	3362	0	0	3511	0	0	0	0	0	5075	1583
Flt Permitted					0.877						0.998	
Satd. Flow (perm)	0	3362	0	0	3104	0	0	0	0	0	5075	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15										232
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			465			349			422	
Travel Time (s)		3.8			10.6			7.9			9.6	
Peak Hour Factor	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)	0	100	50	56	283	0	0	0	0	78	2094	389
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	339	0	0	0	0	0	2172	389
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Minimum Split (s)		20.9		20.9	20.9					47.0	47.0	47.0
Total Split (s)	0.0	23.0	0.0	23.0	23.0	0.0	0.0	0.0	0.0	57.0	57.0	57.0
Total Split (%)	0.0%	28.8%	0.0%	28.8%	28.8%	0.0%	0.0%	0.0%	0.0%	71.3%	71.3%	71.3%
Maximum Green (s)		18.1		18.1	18.1					52.1	52.1	52.1
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		1.7		1.7	1.7					1.7	1.7	1.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.9	3.0	3.9	3.9	3.0	3.0	3.0	3.0	3.9	3.9	3.9
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		19.1			19.1						53.1	53.1
Actuated g/C Ratio		0.24			0.24						0.66	0.66
v/c Ratio		0.18			0.46						0.64	0.34
Control Delay		22.5			28.4						8.9	3.1
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		22.5			28.4						8.9	3.1
LOS		C			C						A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.5			28.4						8.1	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 10 (13%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 60.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 312: Genesee & Oak

Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	150	339	2172	389
v/c Ratio	0.18	0.46	0.64	0.34
Control Delay	22.5	28.4	8.9	3.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.5	28.4	8.9	3.1
Queue Length 50th (ft)	28	76	199	26
Queue Length 95th (ft)	52	116	237	58
Internal Link Dist (ft)	89	385	342	
Turn Bay Length (ft)				
Base Capacity (vph)	814	741	3369	1129
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.46	0.64	0.34

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	120	0	0	120	20	160	2020	185	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.979				0.850			
Flt Protected		0.987						0.996				
Satd. Flow (prot)	0	3493	0	0	3465	0	0	5065	1583	0	0	0
Flt Permitted		0.836						0.996				
Satd. Flow (perm)	0	2959	0	0	3465	0	0	5065	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					14				206			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		465			518			461			260	
Travel Time (s)		10.6			11.8			10.5			5.9	
Peak Hour Factor	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)	50	133	0	0	133	22	178	2244	206	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	183	0	0	155	0	0	2422	206	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm		Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Minimum Split (s)	24.0	24.0			24.0		42.0	42.0	42.0			
Total Split (s)	29.0	29.0	0.0	0.0	29.0	0.0	81.0	81.0	81.0	0.0	0.0	0.0
Total Split (%)	26.4%	26.4%	0.0%	0.0%	26.4%	0.0%	73.6%	73.6%	73.6%	0.0%	0.0%	0.0%
Maximum Green (s)	24.2	24.2			24.2		76.2	76.2	76.2			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	1.6	1.6			1.6		1.6	1.6	1.6			
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.8	3.8	3.0	3.0	3.8	3.0	3.8	3.8	3.8	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)		25.2			25.2			77.2	77.2			
Actuated g/C Ratio		0.23			0.23			0.70	0.70			
v/c Ratio		0.27			0.19			0.68	0.18			
Control Delay		36.1			31.8			23.0	3.9			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		36.1			31.8			23.0	3.9			
LOS		D			C			C	A			
Approach Delay		36.1			31.8			21.5				
Approach LOS		D			C			C				

Intersection Summary	
Area Type: Other	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 1 (1%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 23.0	Intersection LOS: C
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 313: Genesee & Elm St

Lane Group	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	183	155	2422	206
v/c Ratio	0.27	0.19	0.68	0.18
Control Delay	36.1	31.8	23.0	3.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	36.1	31.8	23.0	3.9
Queue Length 50th (ft)	56	42	633	32
Queue Length 95th (ft)	88	71	689	m55
Internal Link Dist (ft)	385	438	381	
Turn Bay Length (ft)				200
Base Capacity (vph)	678	805	3555	1172
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.19	0.68	0.18

Intersection Summary

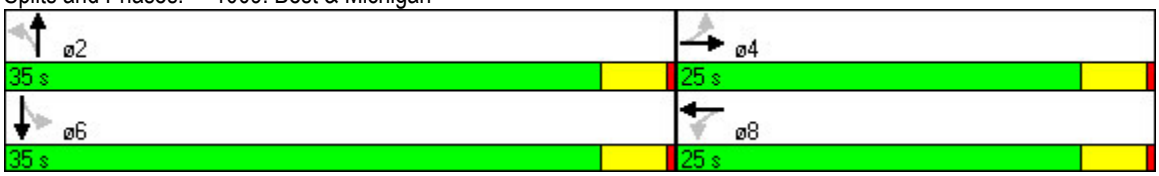
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	185	50	20	160	5	25	115	10	35	200	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.996			0.991			0.995	
Flt Protected		0.999			0.995			0.992			0.993	
Satd. Flow (prot)	0	1809	0	0	1846	0	0	1831	0	0	1840	0
Flt Permitted		0.994			0.957			0.936			0.950	
Satd. Flow (perm)	0	1800	0	0	1776	0	0	1728	0	0	1761	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			3			9			5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			349			643			576	
Travel Time (s)		21.9			7.9			14.6			13.1	
Peak Hour Factor	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)	6	206	56	22	178	6	28	128	11	39	222	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	268	0	0	206	0	0	167	0	0	272	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
v/c Ratio		0.40			0.32			0.18			0.29	
Control Delay		14.9			15.1			7.5			8.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.9			15.1			7.5			8.6	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		14.9			15.1			7.5			8.6	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 11.7	Intersection LOS: B
Intersection Capacity Utilization 42.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1009: Best & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	268	206	167	272
v/c Ratio	0.40	0.32	0.18	0.29
Control Delay	14.9	15.1	7.5	8.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.9	15.1	7.5	8.6
Queue Length 50th (ft)	63	51	27	48
Queue Length 95th (ft)	117	96	53	87
Internal Link Dist (ft)	884	269	563	496
Turn Bay Length (ft)				
Base Capacity (vph)	676	653	926	942
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.40	0.32	0.18	0.29

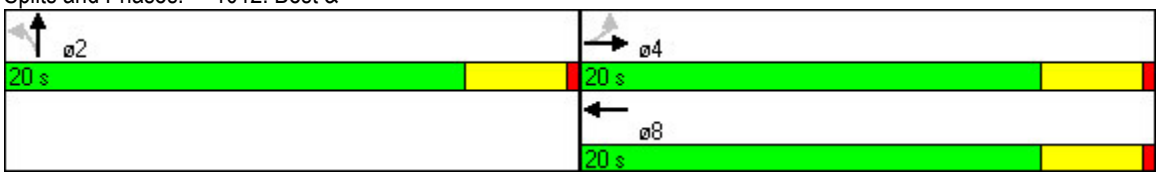
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	130	0	0	135	30	35	35	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.976			0.960				
Flt Protected		0.998						0.982				
Satd. Flow (prot)	0	1859	0	0	1818	0	0	3336	0	0	0	0
Flt Permitted		0.990						0.982				
Satd. Flow (perm)	0	1844	0	0	1818	0	0	3336	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					33			28				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		178			964			653			187	
Travel Time (s)		4.0			21.9			14.8			4.3	
Peak Hour Factor	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)	6	144	0	0	150	33	39	39	28	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	183	0	0	106	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	20.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	0.0%	50.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0			16.0		16.0	16.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.0			17.0			17.0				
Actuated g/C Ratio		0.42			0.42			0.42				
v/c Ratio		0.19			0.23			0.07				
Control Delay		8.0			7.0			5.6				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.0			7.0			5.6				
LOS		A			A			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.0			7.0			5.6				
Approach LOS		A			A			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 40	
Actuated Cycle Length: 40	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.23	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 20.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1012: Best &



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	150	183	106
v/c Ratio	0.19	0.23	0.07
Control Delay	8.0	7.0	5.6
Queue Delay	0.0	0.0	0.0
Total Delay	8.0	7.0	5.6
Queue Length 50th (ft)	19	19	4
Queue Length 95th (ft)	43	46	14
Internal Link Dist (ft)	98	884	573
Turn Bay Length (ft)			
Base Capacity (vph)	784	792	1434
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.19	0.23	0.07

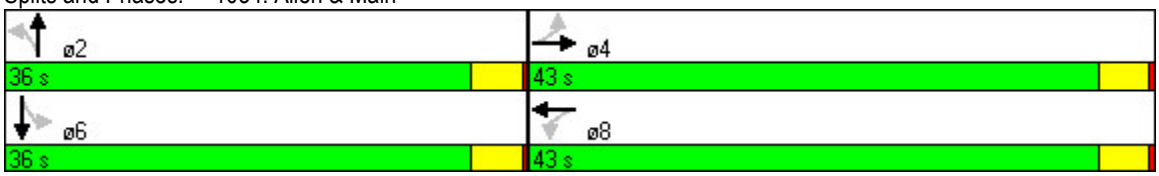
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	20	110	5	25	5	20	150	5	5	410	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.935			0.980			0.995			0.985	
Flt Protected		0.979			0.993			0.994			0.999	
Satd. Flow (prot)	0	1705	0	0	1813	0	0	3500	0	0	5004	0
Flt Permitted		0.860			0.966			0.886			0.938	
Satd. Flow (perm)	0	1498	0	0	1763	0	0	3120	0	0	4698	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		83			6			5			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		319			288			287			353	
Travel Time (s)		7.3			6.5			6.5			8.0	
Peak Hour Factor	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)	111	22	122	6	28	6	22	167	6	6	456	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	255	0	0	40	0	0	195	0	0	512	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	43.0	43.0	0.0	43.0	43.0	0.0	36.0	36.0	0.0	36.0	36.0	0.0
Total Split (%)	54.4%	54.4%	0.0%	54.4%	54.4%	0.0%	45.6%	45.6%	0.0%	45.6%	45.6%	0.0%
Maximum Green (s)	39.0	39.0		39.0	39.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	0.0	-1.0	0.0	0.0	0.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	3.0	4.0	4.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		39.0			39.0			33.0			33.0	
Actuated g/C Ratio		0.49			0.49			0.42			0.42	
v/c Ratio		0.33			0.05			0.15			0.26	
Control Delay		9.3			9.4			14.3			14.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.3			9.4			14.3			14.6	
LOS		A			A			B			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.3			9.4			14.3			14.6	
Approach LOS		A			A			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 79	
Actuated Cycle Length: 79	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 43.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1034: Allen & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	255	40	195	512
v/c Ratio	0.33	0.05	0.15	0.26
Control Delay	9.3	9.4	14.3	14.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.3	9.4	14.3	14.6
Queue Length 50th (ft)	46	8	29	54
Queue Length 95th (ft)	93	23	50	78
Internal Link Dist (ft)	239	208	207	273
Turn Bay Length (ft)				
Base Capacity (vph)	782	873	1306	1979
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.33	0.05	0.15	0.26

Intersection Summary

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	805	935	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.88	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	3539	2787	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	3539	2787	0	0	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	260			560	477	
Travel Time (s)	5.9			12.7	10.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	894	1039	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	894	1039	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	485	0	0	0	0	935
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			969	284	
Travel Time (s)	7.3			22.0	6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	539	0	0	0	0	1039
Shared Lane Traffic (%)						
Lane Group Flow (vph)	539	0	0	0	0	1039
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 52.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	310	2800	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	3539	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	422			611	490	
Travel Time (s)	9.6			13.9	11.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	344	3111	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	344	3111	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 239.7%	ICU Level of Service H
Analysis Period (min) 15	

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	2800	3040	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	3433	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	3433	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	223			542	780	
Travel Time (s)	5.1			12.3	17.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	3111	3378	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	3111	3378	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 239.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	540	100	225	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.977			
Flt Protected					0.950	
Satd. Flow (prot)	0	0	3458	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	3458	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	547		441			294
Travel Time (s)	12.4		10.0			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	600	111	250	372
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	711	0	250	372
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 80.4%		ICU Level of Service D	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	540	100	225	335
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	600	111	250	372
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			441			636
pX, platoon unblocked	0.92	0.96			0.96	
vC, conflicting volume	1528	356			711	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1367	245			616	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			73	
cM capacity (veh/h)	92	725			922	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	400	311	250	372
Volume Left	0	0	250	0
Volume Right	0	111	0	0
cSH	1700	1700	922	1700
Volume to Capacity	0.24	0.18	0.27	0.22
Queue Length 95th (ft)	0	0	28	0
Control Delay (s)	0.0	0.0	10.4	0.0
Lane LOS			B	
Approach Delay (s)	0.0		4.2	
Approach LOS				

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	125	55	40	140	50	30	255	25	65	485	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.966			0.970			0.988			0.993	
Flt Protected		0.991			0.991			0.995			0.994	
Satd. Flow (prot)	0	1783	0	0	1791	0	0	3479	0	0	5019	0
Flt Permitted		0.875			0.890			0.868			0.884	
Satd. Flow (perm)	0	1574	0	0	1608	0	0	3035	0	0	4464	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			19			11			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		111			158			910			474	
Travel Time (s)		2.5			3.6			20.7			10.8	
Peak Hour Factor	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)	44	139	61	44	156	56	33	283	28	72	539	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	0	256	0	0	344	0	0	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	1 6	
Permitted Phases	4			8			2			1 6		
Detector Phase	4	4		8	8		2	2		1	1 6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		10.0		
Total Split (s)	33.0	33.0	0.0	33.0	33.0	0.0	29.0	29.0	0.0	22.0	73.0	0.0
Total Split (%)	39.3%	39.3%	0.0%	39.3%	39.3%	0.0%	34.5%	34.5%	0.0%	26.2%	86.9%	0.0%
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		16.0		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		5.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5		

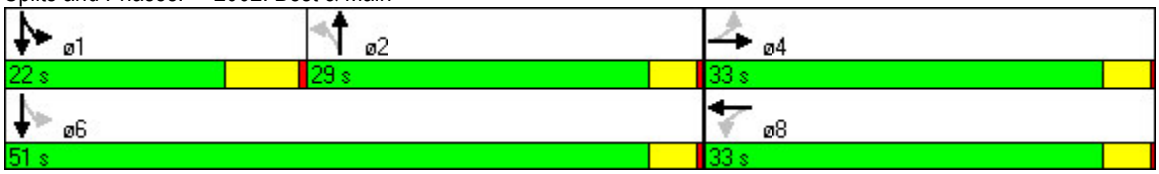
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	51.0
Total Split (%)	61%
Maximum Green (s)	47.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-3.0	-3.0	-1.0
Total Lost Time (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
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		
Recall Mode	Min	Min		Min	Min		Max	Max		Max		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0	0		0	0				
Act Effct Green (s)		16.3			16.3			26.1			48.2	
Actuated g/C Ratio		0.23			0.23			0.37			0.68	
v/c Ratio		0.64			0.66			0.30			0.20	
Control Delay		30.2			31.4			17.0			4.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		30.2			31.4			17.0			4.6	
LOS		C			C			B			A	
Approach Delay		30.2			31.4			17.0			4.6	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 84
Actuated Cycle Length: 70.5
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 16.3 — Intersection LOS: B
Intersection Capacity Utilization 46.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2002: Best & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	244	256	344	639
v/c Ratio	0.64	0.66	0.30	0.20
Control Delay	30.2	31.4	17.0	4.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.2	31.4	17.0	4.6
Queue Length 50th (ft)	87	93	52	29
Queue Length 95th (ft)	155	163	95	57
Internal Link Dist (ft)	31	78	830	394
Turn Bay Length (ft)				
Base Capacity (vph)	685	698	1131	3208
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.36	0.37	0.30	0.20

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	160	90	25	135	20	85	245	15	35	525	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91
Frt		0.957			0.985			0.993			0.979	
Flt Protected		0.994			0.993			0.988			0.997	
Satd. Flow (prot)	0	1772	0	0	1822	0	0	3472	0	0	4964	0
Flt Permitted		0.954			0.927			0.744			0.906	
Satd. Flow (perm)	0	1701	0	0	1701	0	0	2615	0	0	4511	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		34			9			10			48	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		250			335			338			910	
Travel Time (s)		5.7			7.6			7.7			20.7	
Peak Hour Factor	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)	39	178	100	28	150	22	94	272	17	39	583	100
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	317	0	0	200	0	0	383	0	0	722	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	14.0	60.0	0.0	32.0	32.0	0.0
Total Split (%)	38.7%	38.7%	0.0%	38.7%	38.7%	0.0%	18.7%	80.0%	0.0%	42.7%	42.7%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0			28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

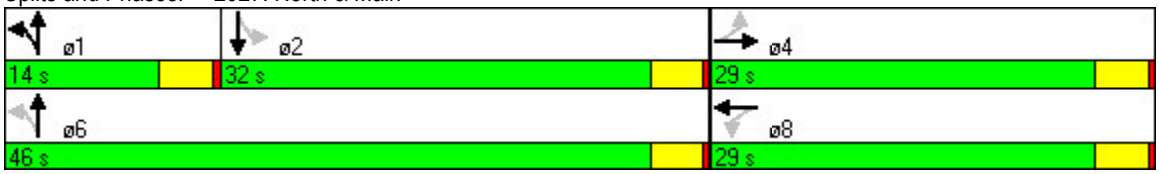
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	46.0
Total Split (%)	61%
Maximum Green (s)	42.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		None			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		17.2			17.2			41.6			29.3	
Actuated g/C Ratio		0.27			0.27			0.64			0.45	
v/c Ratio		0.66			0.44			0.21			0.35	
Control Delay		26.0			21.8			5.7			12.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		26.0			21.8			5.7			12.4	
LOS		C			C			A			B	
Approach Delay		26.0			21.8			5.7			12.4	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 64.8
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 14.6 — Intersection LOS: B
Intersection Capacity Utilization 53.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2027: North & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	317	200	383	722
v/c Ratio	0.66	0.44	0.21	0.35
Control Delay	26.0	21.8	5.7	12.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.0	21.8	5.7	12.4
Queue Length 50th (ft)	98	62	26	59
Queue Length 95th (ft)	178	117	58	110
Internal Link Dist (ft)	170	255	258	830
Turn Bay Length (ft)				
Base Capacity (vph)	709	694	1901	2064
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.29	0.20	0.35

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	5	30	360	25	35	795
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	0.91	0.91
Frt	0.886		0.990			
Flt Protected	0.992					0.998
Satd. Flow (prot)	1491	0	3340	0	0	5026
Flt Permitted	0.992					0.908
Satd. Flow (perm)	1491	0	3340	0	0	4573
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	33		18			
Link Speed (mph)	30		30			30
Link Distance (ft)	383		474			728
Travel Time (s)	8.7		10.8			16.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	12%	12%	7%	7%	3%	3%
Adj. Flow (vph)	6	33	400	28	39	883
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	428	0	0	922
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Maximum Green (s)	21.0		51.0		51.0	51.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	6.4		68.1			68.1
Actuated g/C Ratio	0.08		0.89			0.89
v/c Ratio	0.25		0.14			0.23
Control Delay	19.3		1.3			1.4
Queue Delay	0.0		0.0			0.0
Total Delay	19.3		1.3			1.4
LOS	B		A			A
Approach Delay	19.3		1.3			1.4
Approach LOS	B		A			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 76.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.25
Intersection Signal Delay: 1.9 — Intersection LOS: A
Intersection Capacity Utilization 40.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2101: Dodge & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	39	428	922
v/c Ratio	0.25	0.14	0.23
Control Delay	19.3	1.3	1.4
Queue Delay	0.0	0.0	0.0
Total Delay	19.3	1.3	1.4
Queue Length 50th (ft)	3	13	22
Queue Length 95th (ft)	31	26	41
Internal Link Dist (ft)	303	394	648
Turn Bay Length (ft)			
Base Capacity (vph)	434	2969	4063
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.09	0.14	0.23

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	40	60	15	30	5	55	365	10	5	885	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.929			0.986			0.997			0.999	
Flt Protected		0.993			0.985			0.994				
Satd. Flow (prot)	0	1718	0	0	1809	0	0	1846	0	0	1861	0
Flt Permitted		0.953			0.924			0.891			0.997	
Satd. Flow (perm)	0	1649	0	0	1697	0	0	1655	0	0	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67			6			3			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			388			675			662	
Travel Time (s)		8.6			8.8			15.3			15.0	
Peak Hour Factor	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)	17	44	67	17	33	6	61	406	11	6	983	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	128	0	0	56	0	0	478	0	0	1000	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	23.0	23.0	0.0	23.0	23.0	0.0	14.0	51.0	0.0	23.0	23.0	0.0
Total Split (%)	38.3%	38.3%	0.0%	38.3%	38.3%	0.0%	23.3%	85.0%	0.0%	38.3%	38.3%	0.0%
Maximum Green (s)	19.0	19.0		19.0	19.0		10.0			19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

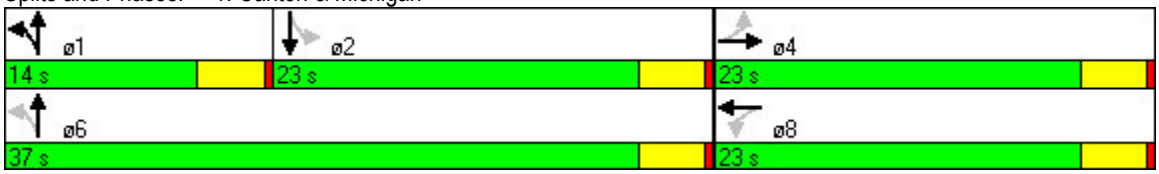
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	37.0
Total Split (%)	62%
Maximum Green (s)	33.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		Max			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		8.5			8.5			34.5			20.3	
Actuated g/C Ratio		0.18			0.18			0.74			0.43	
v/c Ratio		0.36			0.18			0.38			1.24	
Control Delay		12.8			16.8			4.1			139.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.8			16.8			4.1			139.2	
LOS		B			B			A			F	
Approach Delay		12.8			16.8			4.1			139.2	
Approach LOS		B			B			A			F	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 46.7
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.24
Intersection Signal Delay: 86.5 — Intersection LOS: F
Intersection Capacity Utilization 74.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Carlton & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	128	56	478	1000
v/c Ratio	0.36	0.18	0.38	1.24
Control Delay	12.8	16.8	4.1	139.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.8	16.8	4.1	139.2
Queue Length 50th (ft)	15	12	37	~384
Queue Length 95th (ft)	50	35	91	#634
Internal Link Dist (ft)	297	308	595	582
Turn Bay Length (ft)				
Base Capacity (vph)	754	741	1269	806
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.08	0.38	1.24

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	90	40	35	140	25	45	225	25	5	425	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.960			0.983			0.988			0.990	
Flt Protected		0.998			0.991			0.992			0.999	
Satd. Flow (prot)	0	1785	0	0	1815	0	0	1826	0	0	1842	0
Flt Permitted		0.998			0.991			0.992			0.999	
Satd. Flow (perm)	0	1785	0	0	1815	0	0	1826	0	0	1842	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			295	
Travel Time (s)		7.4			17.0			9.7			6.7	
Peak Hour Factor	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)	6	100	44	39	156	28	50	250	28	6	472	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	223	0	0	328	0	0	517	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	90	40	35	140	25	45	225	25	5	425	35
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	100	44	39	156	28	50	250	28	6	472	39

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	150	222	328	517
Volume Left (vph)	6	39	50	6
Volume Right (vph)	44	28	28	39
Hadj (s)	-0.14	-0.01	0.01	-0.01
Departure Headway (s)	7.0	6.9	6.3	5.9
Degree Utilization, x	0.29	0.42	0.57	0.85
Capacity (veh/h)	453	479	535	590
Control Delay (s)	12.8	14.8	17.2	32.9
Approach Delay (s)	12.8	14.8	17.2	32.9
Approach LOS	B	B	C	D

Intersection Summary			
Delay	22.9		
HCM Level of Service	C		
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	75	10	75	140	5	15	80	20	15	120	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.985			0.997			0.977			0.994	
Flt Protected		0.997			0.983			0.993			0.995	
Satd. Flow (prot)	0	1829	0	0	1826	0	0	1807	0	0	3500	0
Flt Permitted		0.997			0.983			0.993			0.995	
Satd. Flow (perm)	0	1829	0	0	1826	0	0	1807	0	0	3500	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		287			325			1308			290	
Travel Time (s)		6.5			7.4			29.7			6.6	
Peak Hour Factor	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)	6	83	11	83	156	6	17	89	22	17	133	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	245	0	0	128	0	0	156	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
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												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	75	10	75	140	5	15	80	20	15	120	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	83	11	83	156	6	17	89	22	17	133	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	100	244	128	83	72
Volume Left (vph)	6	83	17	17	0
Volume Right (vph)	11	6	22	0	6
Hadj (s)	-0.02	0.09	-0.04	0.13	-0.02
Departure Headway (s)	5.0	4.9	5.1	5.7	5.5
Degree Utilization, x	0.14	0.33	0.18	0.13	0.11
Capacity (veh/h)	668	699	658	593	610
Control Delay (s)	8.7	10.2	9.2	8.3	8.0
Approach Delay (s)	8.7	10.2	9.2	8.2	
Approach LOS	A	B	A	A	

Intersection Summary			
Delay	9.3		
HCM Level of Service	A		
Intersection Capacity Utilization	38.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	160	290	10	75	415
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.892		0.995			
Flt Protected	0.990					0.992
Satd. Flow (prot)	1645	0	5060	0	0	3511
Flt Permitted	0.990					0.992
Satd. Flow (perm)	1645	0	5060	0	0	3511
Link Speed (mph)	30		30			30
Link Distance (ft)	287		565			287
Travel Time (s)	6.5		12.8			6.5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	178	322	11	83	461
Shared Lane Traffic (%)						
Lane Group Flow (vph)	222	0	333	0	0	544
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 41.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	40	160	290	10	75	415
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	44	178	322	11	83	461
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			565			287
pX, platoon unblocked	0.98					
vC, conflicting volume	725	113			333	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	687	113			333	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	81			93	
cM capacity (veh/h)	349	918			1223	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	222	129	129	76	237	307
Volume Left	44	0	0	0	83	0
Volume Right	178	0	0	11	0	0
cSH	692	1700	1700	1700	1223	1700
Volume to Capacity	0.32	0.08	0.08	0.04	0.07	0.18
Queue Length 95th (ft)	35	0	0	0	5	0
Control Delay (s)	12.6	0.0	0.0	0.0	3.3	0.0
Lane LOS	B				A	
Approach Delay (s)	12.6	0.0			1.4	
Approach LOS	B					

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	45	40	5	20	5	50	320	10	30	725	395
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.976			0.976			0.996			0.948	
Flt Protected		0.970			0.991			0.993			0.999	
Satd. Flow (prot)	0	1763	0	0	1802	0	0	1842	0	0	3352	0
Flt Permitted		0.798			0.951			0.767			0.939	
Satd. Flow (perm)	0	1451	0	0	1729	0	0	1423	0	0	3151	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			6			4			294	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1103			233			662			363	
Travel Time (s)		25.1			5.3			15.0			8.3	
Peak Hour Factor	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)	150	50	44	6	22	6	56	356	11	33	806	439
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	0	34	0	0	423	0	0	1278	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.58			0.07			0.48			0.62	
Control Delay		23.4			14.3			8.5			6.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		23.4			14.3			8.5			6.9	
LOS		C			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		23.4			14.3			8.5			6.9	
Approach LOS		C			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 82.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 6: High & Michigan

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	244	34	423	1278
v/c Ratio	0.58	0.07	0.48	0.62
Control Delay	23.4	14.3	8.5	6.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.4	14.3	8.5	6.9
Queue Length 50th (ft)	69	7	70	92
Queue Length 95th (ft)	134	25	128	143
Internal Link Dist (ft)	1023	153	582	283
Turn Bay Length (ft)				
Base Capacity (vph)	424	494	879	2056
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.58	0.07	0.48	0.62

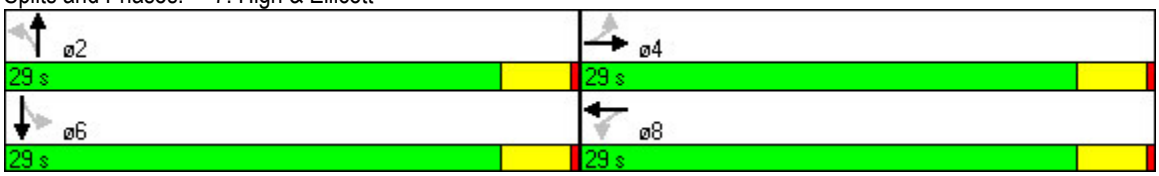
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	185	30	195	245	50	40	130	145	0	235	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.986			0.938				
Flt Protected		0.996			0.980			0.994				
Satd. Flow (prot)	0	1824	0	0	1800	0	0	1737	0	0	1863	0
Flt Permitted		0.947			0.759			0.941				
Satd. Flow (perm)	0	1734	0	0	1394	0	0	1644	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			13			96				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			1103			363			184	
Travel Time (s)		3.8			25.1			8.3			4.2	
Peak Hour Factor	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)	22	206	33	217	272	56	44	144	161	0	261	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	261	0	0	545	0	0	349	0	0	261	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0	29.0	29.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		26.0			26.0			26.0			26.0	
Actuated g/C Ratio		0.45			0.45			0.45			0.45	
v/c Ratio		0.33			0.86			0.44			0.31	
Control Delay		11.2			31.3			9.9			11.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.2			31.3			9.9			11.6	
LOS		B			C			A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.2			31.3			9.9			11.6	
Approach LOS		B			C			A			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 50	
Control Type: Pretimed	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 83.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: High & Ellicott



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	261	545	349	261
v/c Ratio	0.33	0.86	0.44	0.31
Control Delay	11.2	31.3	9.9	11.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.2	31.3	9.9	11.6
Queue Length 50th (ft)	52	157	54	55
Queue Length 95th (ft)	97	#336	110	99
Internal Link Dist (ft)	89	1023	283	104
Turn Bay Length (ft)				
Base Capacity (vph)	786	632	790	835
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.33	0.86	0.44	0.31

Intersection Summary

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lane Configurations							
Volume (vph)	115	185	410	65	110	490	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95	
Frt	0.917		0.980				
Flt Protected	0.981					0.991	
Satd. Flow (prot)	1676	0	4984	0	0	3507	
Flt Permitted	0.981					0.781	
Satd. Flow (perm)	1676	0	4984	0	0	2764	
Right Turn on Red		Yes		Yes			
Satd. Flow (RTOR)	109		49				
Link Speed (mph)	30		30			30	
Link Distance (ft)	293		353			353	
Travel Time (s)	6.7		8.0			8.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Adj. Flow (vph)	128	206	456	72	122	544	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	334	0	528	0	0	666	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	
Median Width(ft)	12		0			0	
Link Offset(ft)	0		0			0	
Crosswalk Width(ft)	16		16			16	
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9		9	15		
Number of Detectors	1		1		1	1	
Detector Template							
Leading Detector (ft)	50		50		50	50	
Trailing Detector (ft)	0		0		0	0	
Detector 1 Position(ft)	0		0		0	0	
Detector 1 Size(ft)	50		50		50	50	
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel							
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	
Turn Type					custom		
Protected Phases	8		2		1	1 6	6
Permitted Phases					6		
Detector Phase	8		2		1	1 6	
Switch Phase							
Minimum Initial (s)	4.0		4.0		4.0		4.0
Minimum Split (s)	20.0		20.0		8.0		20.0
Total Split (s)	27.0	0.0	36.0	0.0	14.0	64.0	50.0
Total Split (%)	35.1%	0.0%	46.8%	0.0%	18.2%	83.1%	65%
Maximum Green (s)	23.0		32.0		10.0		46.0
Yellow Time (s)	3.5		3.5		3.5		3.5
All-Red Time (s)	0.5		0.5		0.5		0.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø6
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	
Lead/Lag			Lag		Lead		
Lead-Lag Optimize?			Yes		Yes		
Vehicle Extension (s)	3.0		3.0		3.0		3.0
Recall Mode	Min		Max		None		Max
Walk Time (s)	5.0		5.0				5.0
Flash Dont Walk (s)	11.0		11.0				11.0
Pedestrian Calls (#/hr)	0		0				0
Act Effct Green (s)	15.9		33.9			47.3	
Actuated g/C Ratio	0.23		0.49			0.68	
v/c Ratio	0.71		0.21			0.33	
Control Delay	24.9		10.3			5.5	
Queue Delay	0.0		0.0			0.0	
Total Delay	24.9		10.3			5.5	
LOS	C		B			A	
Approach Delay	24.9		10.3			5.5	
Approach LOS	C		B			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 77	
Actuated Cycle Length: 69.2	
Natural Cycle: 50	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 11.4	Intersection LOS: B
Intersection Capacity Utilization 53.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: High & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	334	528	666
v/c Ratio	0.71	0.21	0.33
Control Delay	24.9	10.3	5.5
Queue Delay	0.0	0.0	0.0
Total Delay	24.9	10.3	5.5
Queue Length 50th (ft)	86	40	47
Queue Length 95th (ft)	167	73	100
Internal Link Dist (ft)	213	273	273
Turn Bay Length (ft)			
Base Capacity (vph)	656	2468	2007
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.51	0.21	0.33

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	20	110	0	0	0	40	440	10	5	770	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.890						0.997			0.997	
Flt Protected		0.998						0.996				
Satd. Flow (prot)	0	1655	0	0	0	0	0	1850	0	0	1857	0
Flt Permitted		0.998						0.904			0.997	
Satd. Flow (perm)	0	1655	0	0	0	0	0	1679	0	0	1852	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		122						3			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			376			922			675	
Travel Time (s)		8.3			8.5			21.0			15.3	
Peak Hour Factor	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)	6	22	122	0	0	0	44	489	11	6	856	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	0	0	0	544	0	0	884	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm			Perm		
Protected Phases		4						2			6	
Permitted Phases	4						2			6		
Minimum Split (s)	20.0	20.0					20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	0.0%	0.0%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0					36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5					3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5					0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0					5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.0						37.0			37.0	
Actuated g/C Ratio		0.28						0.62			0.62	
v/c Ratio		0.27						0.52			0.77	
Control Delay		6.9						8.8			14.5	
Queue Delay		0.0						0.0			0.0	
Total Delay		6.9						8.8			14.5	
LOS		A						A			B	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		6.9						8.8			14.5	
Approach LOS		A						A			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 11.8	Intersection LOS: B
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Virginia & Michigan

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	150	544	884
v/c Ratio	0.27	0.52	0.77
Control Delay	6.9	8.8	14.5
Queue Delay	0.0	0.0	0.0
Total Delay	6.9	8.8	14.5
Queue Length 50th (ft)	7	95	199
Queue Length 95th (ft)	43	162	347
Internal Link Dist (ft)	283	842	595
Turn Bay Length (ft)			
Base Capacity (vph)	556	1037	1144
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.27	0.52	0.77

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	70	40	335	60	5	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.951		0.979			
Flt Protected	0.969					0.999
Satd. Flow (prot)	1717	0	1824	0	0	1861
Flt Permitted	0.969					0.999
Satd. Flow (perm)	1717	0	1824	0	0	1861
Link Speed (mph)	30		30			30
Link Distance (ft)	735		148			425
Travel Time (s)	16.7		3.4			9.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	78	44	372	67	6	550
Shared Lane Traffic (%)						
Lane Group Flow (vph)	122	0	439	0	0	556
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	70	40	335	60	5	495
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	78	44	372	67	6	550
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			939			
pX, platoon unblocked						
vC, conflicting volume	967	406			439	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	967	406			439	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	72	93			100	
cM capacity (veh/h)	281	645			1121	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	122	439	556
Volume Left	78	0	6
Volume Right	44	67	0
cSH	353	1700	1121
Volume to Capacity	0.35	0.26	0.00
Queue Length 95th (ft)	38	0	0
Control Delay (s)	20.5	0.0	0.1
Lane LOS	C		A
Approach Delay (s)	20.5	0.0	0.1
Approach LOS	C		

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	120	20	10	130	20	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.981				0.919	
Flt Protected				0.996	0.980	
Satd. Flow (prot)	1827	0	0	1855	1678	0
Flt Permitted				0.996	0.980	
Satd. Flow (perm)	1827	0	0	1855	1678	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	747			377	583	
Travel Time (s)	17.0			8.6	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	133	22	11	144	22	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	155	0	0	155	55	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	120	20	10	130	20	30
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	133	22	11	144	22	33

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	156	156	56
Volume Left (vph)	0	11	22
Volume Right (vph)	22	0	33
Hadj (s)	-0.05	0.05	-0.25
Departure Headway (s)	4.1	4.2	4.3
Degree Utilization, x	0.18	0.18	0.07
Capacity (veh/h)	851	833	773
Control Delay (s)	8.0	8.2	7.6
Approach Delay (s)	8.0	8.2	7.6
Approach LOS	A	A	A

Intersection Summary			
Delay	8.0		
HCM Level of Service	A		
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	5	50	25	10	245	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.962		0.981	
Flt Protected		0.995			0.959	
Satd. Flow (prot)	0	1853	1792	0	1752	0
Flt Permitted		0.995			0.959	
Satd. Flow (perm)	0	1853	1792	0	1752	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		735	363		583	
Travel Time (s)		16.7	8.3		13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	6	56	28	11	272	44
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	62	39	0	316	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 29.5%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	5	50	25	10	245	40
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	56	28	11	272	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)			363			
pX, platoon unblocked						
vC, conflicting volume	39				100	33
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39				100	33
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				70	96
cM capacity (veh/h)	1571				896	1040

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	61	39	317
Volume Left	6	0	272
Volume Right	0	11	44
cSH	1571	1700	913
Volume to Capacity	0.00	0.02	0.35
Queue Length 95th (ft)	0	0	39
Control Delay (s)	0.7	0.0	11.0
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	11.0
Approach LOS			B

Intersection Summary			
Average Delay	8.5		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	355	275	235	330	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.941				0.865	
Flt Protected				0.980		
Satd. Flow (prot)	1753	0	0	1825	1611	0
Flt Permitted				0.980		
Satd. Flow (perm)	1753	0	0	1825	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	791			148	443	
Travel Time (s)	18.0			3.4	10.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	394	306	261	367	0	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	700	0	0	628	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 79.2%		ICU Level of Service D	
Analysis Period (min) 15			

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	355	275	235	330	0	45
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)	394	306	261	367	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	791					
pX, platoon unblocked						
vC, conflicting volume			700		1436	547
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			700		1436	547
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			71		100	91
cM capacity (veh/h)			897		104	537

Direction, Lane #	NB 1	SB 1	NW 1
Volume Total	700	628	50
Volume Left	0	261	0
Volume Right	306	0	50
cSH	1700	897	537
Volume to Capacity	0.41	0.29	0.09
Queue Length 95th (ft)	0	30	8
Control Delay (s)	0.0	6.7	12.4
Lane LOS		A	B
Approach Delay (s)	0.0	6.7	12.4
Approach LOS			B

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	115	5	30	115	10	145	105	90	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995			0.991			0.964				
Flt Protected		0.991			0.990			0.979				
Satd. Flow (prot)	0	1837	0	0	1828	0	0	1758	0	0	0	0
Flt Permitted		0.991			0.990			0.979				
Satd. Flow (perm)	0	1837	0	0	1828	0	0	1758	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		300			1080			316			653	
Travel Time (s)		6.8			24.5			7.2			14.8	
Peak Hour Factor	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)	28	128	6	33	128	11	161	117	100	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	162	0	0	172	0	0	378	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 37.3%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	25	115	5	30	115	10	145	105	90	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	28	128	6	33	128	11	161	117	100	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	161	172	378
Volume Left (vph)	28	33	161
Volume Right (vph)	6	11	100
Hadj (s)	0.05	0.03	-0.04
Departure Headway (s)	5.2	5.1	4.7
Degree Utilization, x	0.23	0.25	0.50
Capacity (veh/h)	645	649	730
Control Delay (s)	9.7	9.8	12.3
Approach Delay (s)	9.7	9.8	12.3
Approach LOS	A	A	B

Intersection Summary			
Delay	11.1		
HCM Level of Service	B		
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	105	60	55	75	15	35	160	100	15	190	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.952			0.986				0.850		0.991	
Flt Protected		0.998			0.981			0.991			0.997	
Satd. Flow (prot)	0	1770	0	0	1802	0	0	1846	1583	0	1840	0
Flt Permitted		0.990			0.716			0.929			0.980	
Satd. Flow (perm)	0	1756	0	0	1315	0	0	1730	1583	0	1809	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			8				111		12	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			412			330			643	
Travel Time (s)		24.5			9.4			7.5			14.6	
Peak Hour Factor	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)	6	117	67	61	83	17	39	178	111	17	211	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	161	0	0	217	111	0	245	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	51.0	51.0	51.0	51.0	51.0	0.0
Total Split (%)	28.2%	28.2%	0.0%	28.2%	28.2%	0.0%	71.8%	71.8%	71.8%	71.8%	71.8%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		47.0	47.0	47.0	47.0	47.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		12.9			12.9			50.5	50.5		50.5	
Actuated g/C Ratio		0.19			0.19			0.73	0.73		0.73	
v/c Ratio		0.53			0.64			0.17	0.09		0.19	
Control Delay		25.4			36.0			3.9	1.1		3.7	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		25.4			36.0			3.9	1.1		3.7	
LOS		C			D			A	A		A	
Approach Delay		25.4			36.0			2.9			3.7	
Approach LOS		C			D			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 71
Actuated Cycle Length: 69.4
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 13.5 — Intersection LOS: B
Intersection Capacity Utilization 50.7% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 21: North & Michigan

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	190	161	217	111	245
v/c Ratio	0.53	0.64	0.17	0.09	0.19
Control Delay	25.4	36.0	3.9	1.1	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	36.0	3.9	1.1	3.7
Queue Length 50th (ft)	56	58	23	0	24
Queue Length 95th (ft)	112	114	52	13	56
Internal Link Dist (ft)	1000	332	250		563
Turn Bay Length (ft)					
Base Capacity (vph)	458	329	1258	1182	1319
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.41	0.49	0.17	0.09	0.19

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	5	20	20	35	50	0	560	10	20	715	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.934			0.935			0.997				
Flt Protected		0.981			0.991						0.999	
Satd. Flow (prot)	0	1707	0	0	1726	0	0	5070	0	0	3536	0
Flt Permitted		0.815			0.927						0.932	
Satd. Flow (perm)	0	1418	0	0	1615	0	0	5070	0	0	3299	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			56			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		401			457			736			698	
Travel Time (s)		9.1			10.4			16.7			15.9	
Peak Hour Factor	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)	17	6	22	22	39	56	0	622	11	22	794	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	117	0	0	633	0	0	816	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		8.4			8.4			59.0			59.0	
Actuated g/C Ratio		0.12			0.12			0.81			0.81	
v/c Ratio		0.24			0.49			0.15			0.30	
Control Delay		20.2			23.8			2.2			2.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.2			23.8			2.2			2.9	
LOS		C			C			A			A	
Approach Delay		20.2			23.8			2.2			2.9	
Approach LOS		C			C			A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 80	
Actuated Cycle Length: 72.6	
Natural Cycle: 40	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 4.6	Intersection LOS: A
Intersection Capacity Utilization 47.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 27: Delta Sonic & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	45	117	633	816
v/c Ratio	0.24	0.49	0.15	0.30
Control Delay	20.2	23.8	2.2	2.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.2	23.8	2.2	2.9
Queue Length 50th (ft)	9	26	18	40
Queue Length 95th (ft)	35	67	35	77
Internal Link Dist (ft)	321	377	656	618
Turn Bay Length (ft)				
Base Capacity (vph)	427	508	4119	2679
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.11	0.23	0.15	0.30

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	0	15	135	100	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950			0.995		
Satd. Flow (prot)	1770	0	0	1853	1863	0
Flt Permitted	0.950			0.995		
Satd. Flow (perm)	1770	0	0	1853	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			182	316	
Travel Time (s)	14.9			4.1	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	0	17	150	111	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	167	111	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 24.6%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	15	0	15	135	100	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	0	17	150	111	0

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	17	167	111
Volume Left (vph)	17	17	0
Volume Right (vph)	0	0	0
Hadj (s)	0.23	0.05	0.03
Departure Headway (s)	4.7	4.1	4.1
Degree Utilization, x	0.02	0.19	0.13
Capacity (veh/h)	706	861	858
Control Delay (s)	7.8	8.1	7.7
Approach Delay (s)	7.8	8.1	7.7
Approach LOS	A	A	A

Intersection Summary			
Delay	7.9		
HCM Level of Service	A		
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	0	25	15	0	40	10	540	5	15	440	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.932			0.865			0.999			0.997	
Flt Protected		0.976		0.950				0.999			0.998	
Satd. Flow (prot)	0	1694	0	1770	0	0	0	5075	0	0	3522	0
Flt Permitted		0.976		0.950				0.999			0.998	
Satd. Flow (perm)	0	1694	0	1770	0	0	0	5075	0	0	3522	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		213			655			353			338	
Travel Time (s)		4.8			14.9			8.0			7.7	
Peak Hour Factor	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)	28	0	28	17	0	44	11	600	6	17	489	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	56	0	17	44	0	0	617	0	0	517	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization Err%	ICU Level of Service H
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	0	25	15	0	40	10	540	5	15	440	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	28	0	28	17	0	44	11	600	6	17	489	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)								353			338	
pX, platoon unblocked	0.95	0.95	0.95	0.95	0.95		0.95					
vC, conflicting volume	794	1156	250	931	1158	203	500			606		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	685	1064	114	828	1067	203	376			606		
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 %	91	100	97	93	100	94	99			98		
cM capacity (veh/h)	294	205	874	238	204	804	1123			968		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	56	61	161	300	156	261	256
Volume Left	28	17	11	0	0	17	0
Volume Right	28	44	0	0	6	0	11
cSH	440	488	1123	1700	1700	968	1700
Volume to Capacity	0.13	0.13	0.01	0.18	0.09	0.02	0.15
Queue Length 95th (ft)	11	11	1	0	0	1	0
Control Delay (s)	14.3	13.4	0.7	0.0	0.0	0.7	0.0
Lane LOS	B	B	A			A	
Approach Delay (s)	14.3	13.4	0.2			0.4	
Approach LOS	B	B					

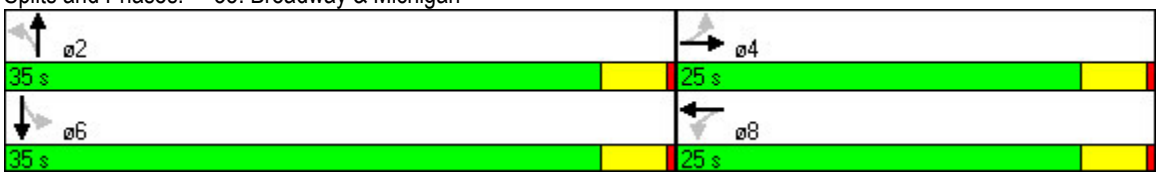
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	185	20	20	110	20	10	400	25	40	225	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.987			0.980			0.991			0.980	
Flt Protected		0.996			0.993			0.999			0.994	
Satd. Flow (prot)	0	3380	0	0	3283	0	0	3504	0	0	3381	0
Flt Permitted		0.927			0.906			0.947			0.865	
Satd. Flow (perm)	0	3146	0	0	2996	0	0	3321	0	0	2942	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			22			15			41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		260			919			684			808	
Travel Time (s)		5.9			20.9			15.5			18.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	22	206	22	22	122	22	11	444	28	44	250	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	250	0	0	166	0	0	483	0	0	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.22			0.16			0.28			0.22	
Control Delay		13.4			12.1			8.5			6.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.4			12.1			8.5			6.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		13.4			12.1			8.5			6.0	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 44.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 35: Broadway & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	250	166	483	338
v/c Ratio	0.22	0.16	0.28	0.22
Control Delay	13.4	12.1	8.5	6.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.4	12.1	8.5	6.0
Queue Length 50th (ft)	30	18	45	22
Queue Length 95th (ft)	53	36	71	35
Internal Link Dist (ft)	180	839	604	728
Turn Bay Length (ft)				
Base Capacity (vph)	1113	1063	1723	1540
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.16	0.28	0.22

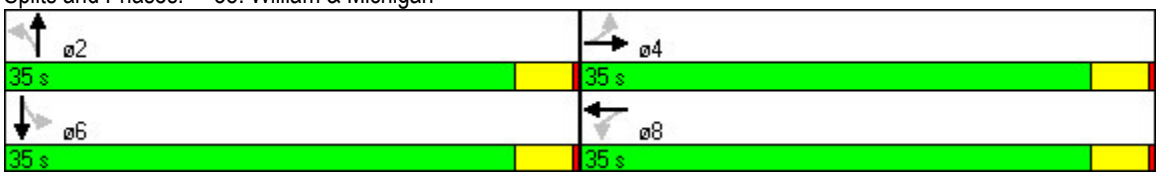
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	105	25	30	115	25	15	400	5	60	205	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. 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
Frt		0.973			0.978			0.998			0.992	
Flt Protected		0.996			0.991			0.998			0.989	
Satd. Flow (prot)	0	3239	0	0	3240	0	0	3424	0	0	3373	0
Flt Permitted		0.938			0.898			0.940			0.798	
Satd. Flow (perm)	0	3051	0	0	2936	0	0	3225	0	0	2722	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			28			2			11	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		191			776			305			684	
Travel Time (s)		4.3			17.6			6.9			15.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	11	117	28	33	128	28	17	444	6	67	228	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	0	0	189	0	0	467	0	0	312	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%	50.0%	50.0%	0.0%
Maximum Green (s)	31.0	31.0		31.0	31.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		31.0			31.0			31.0			31.0	
Actuated g/C Ratio		0.44			0.44			0.44			0.44	
v/c Ratio		0.11			0.14			0.33			0.26	
Control Delay		9.6			10.2			13.5			12.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.6			10.2			13.5			12.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			B			B			B	
Approach Delay		9.6			10.2			13.5			12.5	
Approach LOS		A			B			B			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 41.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 38: William & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	156	189	467	312
v/c Ratio	0.11	0.14	0.33	0.26
Control Delay	9.6	10.2	13.5	12.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.6	10.2	13.5	12.5
Queue Length 50th (ft)	16	20	65	41
Queue Length 95th (ft)	32	38	97	66
Internal Link Dist (ft)	111	696	225	604
Turn Bay Length (ft)				
Base Capacity (vph)	1367	1316	1429	1212
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.11	0.14	0.33	0.26

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	0	3539	0	0	3539
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)						
Link Speed (mph)	30		30			30
Link Distance (ft)	263		290			305
Travel Time (s)	6.0		6.6			6.9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Turn Type						
Protected Phases			2			6
Permitted Phases						
Minimum Split (s)			20.0			20.0
Total Split (s)	0.0	0.0	20.0	0.0	0.0	20.0
Total Split (%)	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Maximum Green (s)			16.0			16.0
Yellow Time (s)			3.5			3.5
All-Red Time (s)			0.5			0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)			5.0			5.0
Flash Dont Walk (s)			11.0			11.0
Pedestrian Calls (#/hr)			0			0
Act Effct Green (s)						
Actuated g/C Ratio						
v/c Ratio						
Control Delay						
Queue Delay						
Total Delay						
LOS						

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay						
Approach LOS						

Intersection Summary			
Area Type:	Other		
Cycle Length: 20			
Actuated Cycle Length: 20			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 40			
Control Type: Pretimed			
Maximum v/c Ratio: 0.00			
Intersection Signal Delay: 0.0		Intersection LOS: A	
Intersection Capacity Utilization 0.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 42: slip ramp & Michigan

Lane Group
Lane Group Flow (vph)
v/c Ratio
Control Delay
Queue Delay
Total Delay
Queue Length 50th (ft)
Queue Length 95th (ft)
Internal Link Dist (ft)
Turn Bay Length (ft)
Base Capacity (vph)
Starvation Cap Reductn
Spillback Cap Reductn
Storage Cap Reductn
Reduced v/c Ratio

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	5	5	25	0	30	5	660	35	15	525	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.955			0.927			0.992				
Flt Protected		0.984			0.978						0.999	
Satd. Flow (prot)	0	1750	0	0	1689	0	0	5045	0	0	3468	0
Flt Permitted		0.928			0.844			0.937			0.929	
Satd. Flow (perm)	0	1651	0	0	1457	0	0	4727	0	0	3225	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			33			20				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		738			789			698			650	
Travel Time (s)		16.8			17.9			15.9			14.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	6	6	6	28	0	33	6	733	39	17	583	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	18	0	0	61	0	0	778	0	0	600	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		7.2			7.2			64.6			64.6	
Actuated g/C Ratio		0.10			0.10			0.87			0.87	
v/c Ratio		0.11			0.36			0.19			0.21	
Control Delay		25.6			23.7			1.6			1.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		25.6			23.7			1.6			1.8	
LOS		C			C			A			A	
Approach Delay		25.6			23.7			1.6			1.8	
Approach LOS		C			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 74.1
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.36
Intersection Signal Delay: 2.9 — Intersection LOS: A
Intersection Capacity Utilization 36.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 47: Enterprise & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	18	61	778	600
v/c Ratio	0.11	0.36	0.19	0.21
Control Delay	25.6	23.7	1.6	1.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	25.6	23.7	1.6	1.8
Queue Length 50th (ft)	6	14	20	24
Queue Length 95th (ft)	22	44	36	45
Internal Link Dist (ft)	658	709	618	570
Turn Bay Length (ft)				
Base Capacity (vph)	474	438	4125	2812
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.14	0.19	0.21

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	65	60	35	85	30	65	605	50	20	490	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.961			0.973			0.990			0.979	
Flt Protected		0.980			0.988			0.996			0.998	
Satd. Flow (prot)	0	1721	0	0	1660	0	0	5014	0	0	3327	0
Flt Permitted		0.747			0.874			0.833			0.919	
Satd. Flow (perm)	0	1311	0	0	1469	0	0	4194	0	0	3064	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			15			29			46	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1128			954			650			1602	
Travel Time (s)		25.6			21.7			14.8			36.4	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	4%	4%	10%	10%	10%	2%	2%	2%	6%	6%	6%
Adj. Flow (vph)	94	72	67	39	94	33	72	672	56	22	544	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	233	0	0	166	0	0	800	0	0	660	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	55.0	55.0	0.0	55.0	55.0	0.0
Total Split (%)	31.3%	31.3%	0.0%	31.3%	31.3%	0.0%	68.8%	68.8%	0.0%	68.8%	68.8%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		51.0	51.0		51.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		15.9			15.9			52.2			52.2	
Actuated g/C Ratio		0.21			0.21			0.69			0.69	
v/c Ratio		0.80			0.52			0.28			0.31	
Control Delay		45.0			29.8			5.2			5.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		45.0			29.8			5.2			5.4	
LOS		D			C			A			A	
Approach Delay		45.0			29.8			5.2			5.4	
Approach LOS		D			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 76.1
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 12.5 — Intersection LOS: B
Intersection Capacity Utilization 59.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 50: Utica & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	233	166	800	660
v/c Ratio	0.80	0.52	0.28	0.31
Control Delay	45.0	29.8	5.2	5.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	45.0	29.8	5.2	5.4
Queue Length 50th (ft)	92	62	44	51
Queue Length 95th (ft)	169	118	73	92
Internal Link Dist (ft)	1048	874	570	1522
Turn Bay Length (ft)				
Base Capacity (vph)	380	417	2888	2117
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.40	0.28	0.31

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	75	115	55	80	125	10	65	610	65	15	435	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.966			0.993			0.987			0.981	
Flt Protected		0.985			0.982			0.996			0.999	
Satd. Flow (prot)	0	3271	0	0	3259	0	0	4951	0	0	3402	0
Flt Permitted		0.791			0.758			0.857			0.928	
Satd. Flow (perm)	0	2627	0	0	2516	0	0	4260	0	0	3160	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		61			8			47			47	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			1227			1602			285	
Travel Time (s)		24.5			27.9			36.4			6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	8%	8%	8%	3%	3%	3%	4%	4%	4%
Adj. Flow (vph)	83	128	61	89	139	11	72	678	72	17	483	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	272	0	0	239	0	0	822	0	0	572	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.2			10.2			36.6			36.6	
Actuated g/C Ratio		0.19			0.19			0.67			0.67	
v/c Ratio		0.50			0.50			0.29			0.27	
Control Delay		18.5			22.9			4.1			4.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		18.5			22.9			4.1			4.1	
LOS		B			C			A			A	
Approach Delay		18.5			22.9			4.1			4.1	
Approach LOS		B			C			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 54.8
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 8.5 — Intersection LOS: A
Intersection Capacity Utilization 55.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 53: Ferry & Main

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	272	239	822	572
v/c Ratio	0.50	0.50	0.29	0.27
Control Delay	18.5	22.9	4.1	4.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.5	22.9	4.1	4.1
Queue Length 50th (ft)	32	35	28	27
Queue Length 95th (ft)	61	63	54	56
Internal Link Dist (ft)	1000	1147	1522	205
Turn Bay Length (ft)				
Base Capacity (vph)	811	741	2860	2125
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.34	0.32	0.29	0.27

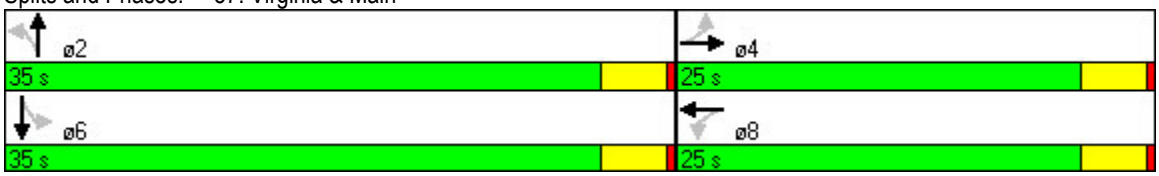
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	50	45	5	40	5	40	230	20	40	320	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.957			0.986			0.990			0.982	
Flt Protected		0.984			0.995			0.993			0.995	
Satd. Flow (prot)	0	1754	0	0	1827	0	0	4999	0	0	3458	0
Flt Permitted		0.907			0.977			0.860			0.900	
Satd. Flow (perm)	0	1617	0	0	1794	0	0	4330	0	0	3128	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		44			6			22			38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		390			155			695			565	
Travel Time (s)		8.9			3.5			15.8			12.8	
Peak Hour Factor	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)	50	56	50	6	44	6	44	256	22	44	356	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	0	0	56	0	0	322	0	0	456	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.26			0.09			0.14			0.28	
Control Delay		11.5			12.6			7.2			8.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		11.5			12.6			7.2			8.0	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		11.5			12.6			7.2			8.0	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.28	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 41.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 57: Virginia & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	156	56	322	456
v/c Ratio	0.26	0.09	0.14	0.28
Control Delay	11.5	12.6	7.2	8.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.5	12.6	7.2	8.0
Queue Length 50th (ft)	28	12	19	40
Queue Length 95th (ft)	65	32	31	64
Internal Link Dist (ft)	310	75	615	485
Turn Bay Length (ft)				
Base Capacity (vph)	595	632	2248	1635
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.26	0.09	0.14	0.28

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	185	0	900	30	0	5	315	185	25	5	270	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.888			0.979			0.994			0.964	
Flt Protected		0.992			0.959			0.971			0.999	
Satd. Flow (prot)	0	1641	0	0	1749	0	0	1798	0	0	1794	0
Flt Permitted		0.992			0.959			0.971			0.999	
Satd. Flow (perm)	0	1641	0	0	1749	0	0	1798	0	0	1794	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		251			192			363			330	
Travel Time (s)		5.7			4.4			8.3			7.5	
Peak Hour Factor	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)	206	0	1000	33	0	6	350	206	28	6	300	111
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1206	0	0	39	0	0	584	0	0	417	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 121.7%	ICU Level of Service H
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	185	0	900	30	0	5	315	185	25	5	270	100
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	206	0	1000	33	0	6	350	206	28	6	300	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)								363			330	
pX, platoon unblocked	0.92	0.92		0.92	0.92	0.92				0.92		
vC, conflicting volume	1292	1300	356	2286	1342	219	411			233		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1274	1283	356	2354	1328	109	411			124		
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 %	0	100	0	0	100	99	70			100		
cM capacity (veh/h)	100	105	688	0	99	870	1148			1347		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	1206	39	583	417
Volume Left	206	33	350	6
Volume Right	1000	6	28	111
cSH	344	0	1148	1347
Volume to Capacity	3.50	Err	0.30	0.00
Queue Length 95th (ft)	Err	Err	32	0
Control Delay (s)	Err	Err	7.0	0.1
Lane LOS	F	F	A	A
Approach Delay (s)	Err	Err	7.0	0.1
Approach LOS	F	F		

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	121.7%	ICU Level of Service	H
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	10	5	260	455	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.947				0.998	
Flt Protected	0.971			0.999		
Satd. Flow (prot)	1713	0	0	1861	1859	0
Flt Permitted	0.971			0.999		
Satd. Flow (perm)	1713	0	0	1861	1859	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	333			295	363	
Travel Time (s)	7.6			6.7	8.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	11	6	289	506	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	28	0	0	295	512	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.3%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	10	5	260	455	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	11	6	289	506	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					363	
pX, platoon unblocked	0.93	0.93	0.93			
vC, conflicting volume	808	508	511			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	754	430	433			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	98	99			
cM capacity (veh/h)	348	579	1044			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	28	294	511
Volume Left	17	6	0
Volume Right	11	0	6
cSH	414	1044	1700
Volume to Capacity	0.07	0.01	0.30
Queue Length 95th (ft)	5	0	0
Control Delay (s)	14.3	0.2	0.0
Lane LOS	B	A	
Approach Delay (s)	14.3	0.2	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	10	10	5	10	5	15	65	15	5	75	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.947			0.965			0.978			0.991	
Flt Protected		0.989			0.987			0.992			0.997	
Satd. Flow (prot)	0	1745	0	0	1774	0	0	1807	0	0	3497	0
Flt Permitted		0.989			0.987			0.992			0.997	
Satd. Flow (perm)	0	1745	0	0	1774	0	0	1807	0	0	3497	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			333			290			355	
Travel Time (s)		6.5			7.6			6.6			8.1	
Peak Hour Factor	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)	6	11	11	6	11	6	17	72	17	6	83	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	28	0	0	23	0	0	106	0	0	95	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	5	10	10	5	10	5	15	65	15	5	75	5
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	6	11	11	6	11	6	17	72	17	6	83	6

Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2
Volume Total (vph)	28	22	106	47	47
Volume Left (vph)	6	6	17	6	0
Volume Right (vph)	11	6	17	0	6
Hadj (s)	-0.17	-0.07	-0.03	0.09	-0.05
Departure Headway (s)	4.2	4.3	4.2	4.8	4.6
Degree Utilization, x	0.03	0.03	0.12	0.06	0.06
Capacity (veh/h)	814	794	839	731	757
Control Delay (s)	7.3	7.4	7.8	6.9	6.7
Approach Delay (s)	7.3	7.4	7.8	6.8	
Approach LOS	A	A	A	A	

Intersection Summary			
Delay	7.3		
HCM Level of Service	A		
Intersection Capacity Utilization	21.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	20	185	285	0	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.865	
Flt Protected		0.995				
Satd. Flow (prot)	0	1853	1863	0	1611	0
Flt Permitted		0.995				
Satd. Flow (perm)	0	1853	1863	0	1611	0
Link Speed (mph)		30	30		30	
Link Distance (ft)		173	169		93	
Travel Time (s)		3.9	3.8		2.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	22	206	317	0	0	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	228	317	0	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 36.4%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	185	285	0	0	45
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)	22	206	317	0	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		466	169			
pX, platoon unblocked						
vC, conflicting volume	317				567	317
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	317				567	317
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				100	93
cM capacity (veh/h)	1243				476	724

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	228	317	50
Volume Left	22	0	0
Volume Right	0	0	50
cSH	1243	1700	724
Volume to Capacity	0.02	0.19	0.07
Queue Length 95th (ft)	1	0	6
Control Delay (s)	0.9	0.0	10.3
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	10.3
Approach LOS			B

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	0	0	0	875	365	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	6408	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	6408	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	339			382	585	
Travel Time (s)	7.7			8.7	13.3	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	972	406	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	972	406	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	0	0	0	875	365	0
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)	0	0	0	972	406	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)	339			382		
pX, platoon unblocked						
vC, conflicting volume			0		243	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		243	0
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		44	100
cM capacity (veh/h)			1622		724	1084

Direction, Lane #	WB 1	WB 2	WB 3	WB 4	NB 1	NB 2
Volume Total	243	243	243	243	203	203
Volume Left	0	0	0	0	203	203
Volume Right	0	0	0	0	0	0
cSH	1700	1700	1700	1700	724	724
Volume to Capacity	0.14	0.14	0.14	0.14	0.28	0.28
Queue Length 95th (ft)	0	0	0	0	29	29
Control Delay (s)	0.0	0.0	0.0	0.0	11.9	11.9
Lane LOS					B	B
Approach Delay (s)	0.0				11.9	
Approach LOS					B	

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	885	25	0	0	0	0	505	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997						0.999	
Flt Protected					0.988							
Satd. Flow (prot)	0	0	0	0	6312	0	0	0	0	0	1861	0
Flt Permitted					0.988							
Satd. Flow (perm)	0	0	0	0	6312	0	0	0	0	0	1861	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					109						1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	322	983	28	0	0	0	0	561	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1333	0	0	0	0	0	567	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.4	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.5	50.5						25.6	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.2	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.4	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					51.5						26.6	
Actuated g/C Ratio					0.61						0.31	
v/c Ratio					0.34						0.97	
Control Delay					7.9						62.0	
Queue Delay					0.0						0.0	
Total Delay					7.9						62.0	
LOS					A						E	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					7.9						62.0	
Approach LOS					A						E	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 24.0	Intersection LOS: C
Intersection Capacity Utilization 51.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 66: Goodell & Oak

Lane Group	WBT	SBT
Lane Group Flow (vph)	1333	567
v/c Ratio	0.34	0.97
Control Delay	7.9	62.0
Queue Delay	0.0	0.0
Total Delay	7.9	62.0
Queue Length 50th (ft)	84	302
Queue Length 95th (ft)	104	m#503
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3867	583
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.34	0.97

Intersection Summary

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

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	10	90	30	170	95	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.878				0.993	
Flt Protected	0.995			0.993		
Satd. Flow (prot)	1627	0	0	1850	1850	0
Flt Permitted	0.995			0.993		
Satd. Flow (perm)	1627	0	0	1850	1850	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	100			184	182	
Travel Time (s)	2.3			4.2	4.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	100	33	189	106	6
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	0	0	222	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 30.1%	ICU Level of Service A
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	90	30	170	95	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	11	100	33	189	106	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				184		
pX, platoon unblocked						
vC, conflicting volume	364	108	111			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	364	108	111			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	89	98			
cM capacity (veh/h)	621	945	1479			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	111	222	111
Volume Left	11	33	0
Volume Right	100	0	6
cSH	899	1479	1700
Volume to Capacity	0.12	0.02	0.07
Queue Length 95th (ft)	11	2	0
Control Delay (s)	9.6	1.3	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	1.3	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	170	10	80	275	35	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993				0.932	
Flt Protected				0.989	0.976	
Satd. Flow (prot)	1850	0	0	1842	1694	0
Flt Permitted				0.989	0.976	
Satd. Flow (perm)	1850	0	0	1842	1694	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	293			173	355	
Travel Time (s)	6.7			3.9	8.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	189	11	89	306	39	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	200	0	0	395	78	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	170	10	80	275	35	35
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)	189	11	89	306	39	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	293			342		
pX, platoon unblocked						
vC, conflicting volume			200		678	194
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			200		678	194
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		90	95
cM capacity (veh/h)			1372		391	847

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	200	394	78
Volume Left	0	89	39
Volume Right	11	0	39
cSH	1700	1372	535
Volume to Capacity	0.12	0.06	0.15
Queue Length 95th (ft)	0	5	13
Control Delay (s)	0.0	2.2	12.9
Lane LOS		A	B
Approach Delay (s)	0.0	2.2	12.9
Approach LOS			B

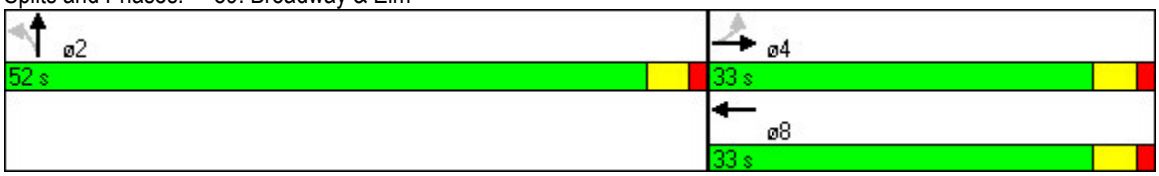
Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	145	0	0	85	25	15	1365	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.966			0.996				
Flt Protected		0.976						0.999				
Satd. Flow (prot)	0	3454	0	0	3419	0	0	5060	0	0	0	0
Flt Permitted		0.758						0.999				
Satd. Flow (perm)	0	2683	0	0	3419	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					28			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		419			219			461			734	
Travel Time (s)		9.5			5.0			10.5			16.7	
Peak Hour Factor	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)	156	161	0	0	94	28	17	1517	39	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	317	0	0	122	0	0	1573	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	23.0	23.0			23.0		41.0	41.0				
Total Split (s)	33.0	33.0	0.0	0.0	33.0	0.0	52.0	52.0	0.0	0.0	0.0	0.0
Total Split (%)	38.8%	38.8%	0.0%	0.0%	38.8%	0.0%	61.2%	61.2%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	28.3	28.3			28.3		47.3	47.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			48.3				
Actuated g/C Ratio		0.34			0.34			0.57				
v/c Ratio		0.34			0.10			0.55				
Control Delay		8.0			14.8			4.2				
Queue Delay		0.0			0.0			0.0				
Total Delay		8.0			14.8			4.3				
LOS		A			B			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.0			14.8			4.3				
Approach LOS		A			B			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 40 (47%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 5.5	Intersection LOS: A
Intersection Capacity Utilization 48.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 89: Broadway & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	317	122	1573
v/c Ratio	0.34	0.10	0.55
Control Delay	8.0	14.8	4.2
Queue Delay	0.0	0.0	0.0
Total Delay	8.0	14.8	4.3
Queue Length 50th (ft)	19	17	49
Queue Length 95th (ft)	m26	36	52
Internal Link Dist (ft)	339	139	381
Turn Bay Length (ft)			
Base Capacity (vph)	925	1197	2878
Starvation Cap Reductn	0	0	153
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.34	0.10	0.58

Intersection Summary

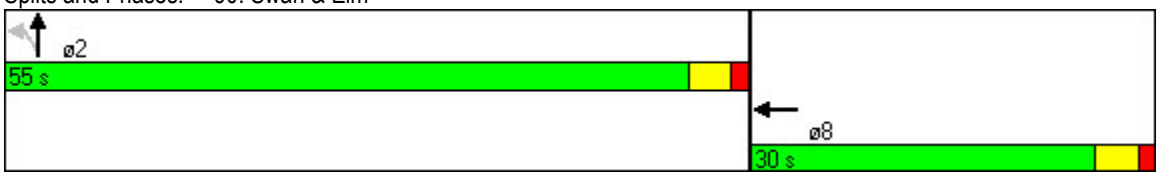
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	250	90	95	715	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.91	1.00	1.00	1.00
Frt					0.968			0.996				
Flt Protected							0.950	0.999				
Satd. Flow (prot)	0	0	0	0	1839	0	1552	4878	0	0	0	0
Flt Permitted							0.950	0.999				
Satd. Flow (perm)	0	0	0	0	1839	0	1552	4878	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					20		112	12				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			208			801			316	
Travel Time (s)		8.2			4.7			18.2			7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.71	0.81	0.76	0.81	0.88	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	0	0	0	0	352	111	125	883	23	0	0	0
Shared Lane Traffic (%)							10%					
Lane Group Flow (vph)	0	0	0	0	463	0	112	919	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					21.2		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		50.4	50.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	2.6	3.0	2.6	2.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					20		22	22				
Act Effct Green (s)					27.4		52.4	52.4				
Actuated g/C Ratio					0.32		0.62	0.62				
v/c Ratio					0.76		0.11	0.31				
Control Delay					34.6		1.7	7.9				
Queue Delay					0.0		0.0	0.0				
Total Delay					34.6		1.7	7.9				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					C		A	A				
Approach Delay					34.6			7.2				
Approach LOS					C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 15.7	Intersection LOS: B
Intersection Capacity Utilization 73.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 90: Swan & Elm



Lane Group	WBT	NBL	NBT
Lane Group Flow (vph)	463	112	919
v/c Ratio	0.76	0.11	0.31
Control Delay	34.6	1.7	7.9
Queue Delay	0.0	0.0	0.0
Total Delay	34.6	1.7	7.9
Queue Length 50th (ft)	211	0	79
Queue Length 95th (ft)	230	12	89
Internal Link Dist (ft)	128		721
Turn Bay Length (ft)			
Base Capacity (vph)	606	1000	3012
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.76	0.11	0.31

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	240	10	80	125	0	0	0	0	50	2005	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.994									0.993	
Flt Protected					0.981						0.999	
Satd. Flow (prot)	0	3518	0	0	3472	0	0	0	0	0	5045	0
Flt Permitted					0.749						0.999	
Satd. Flow (perm)	0	3518	0	0	2651	0	0	0	0	0	5045	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5									16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			419			255			685	
Travel Time (s)		5.1			9.5			5.8			15.6	
Peak Hour Factor	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)	0	267	11	89	139	0	0	0	0	56	2228	117
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	278	0	0	228	0	0	0	0	0	2401	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		24.0		24.0	24.0					41.0	41.0	
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%
Maximum Green (s)		25.3		25.3	25.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		26.3			26.3						51.3	
Actuated g/C Ratio		0.31			0.31						0.60	
v/c Ratio		0.25			0.28						0.79	
Control Delay		22.4			19.3						6.1	
Queue Delay		0.0			0.0						0.0	
Total Delay		22.4			19.3						6.1	
LOS		C			B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.4			19.3						6.1	
Approach LOS		C			B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 33 (39%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 8.7	Intersection LOS: A
Intersection Capacity Utilization 64.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 91: Broadway & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	278	228	2401
v/c Ratio	0.25	0.28	0.79
Control Delay	22.4	19.3	6.1
Queue Delay	0.0	0.0	0.0
Total Delay	22.4	19.3	6.1
Queue Length 50th (ft)	56	37	48
Queue Length 95th (ft)	88	57	53
Internal Link Dist (ft)	146	339	605
Turn Bay Length (ft)			
Base Capacity (vph)	1092	820	3051
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.25	0.28	0.79

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	425	195	165	0	0	0	0	0	2435	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.88	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.86	0.86
Frt			0.850								0.993	
Flt Protected				0.950								
Satd. Flow (prot)	0	0	2787	1770	3539	0	0	0	0	0	6363	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	0	2787	1770	3539	0	0	0	0	0	6363	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)			6	3							23	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		352			359			115			332	
Travel Time (s)		8.0			8.2			2.6			7.5	
Peak Hour Factor	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)	0	0	472	217	183	0	0	0	0	0	2706	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	472	217	183	0	0	0	0	0	2839	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			custom	Perm								
Protected Phases					8						6	
Permitted Phases			4	8								
Minimum Split (s)			20.8	20.8	20.8						50.0	
Total Split (s)	0.0	0.0	26.0	26.0	26.0	0.0	0.0	0.0	0.0	0.0	59.0	0.0
Total Split (%)	0.0%	0.0%	30.6%	30.6%	30.6%	0.0%	0.0%	0.0%	0.0%	0.0%	69.4%	0.0%
Maximum Green (s)			21.2	21.2	21.2						54.2	
Yellow Time (s)			3.2	3.2	3.2						3.2	
All-Red Time (s)			1.6	1.6	1.6						1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.8	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)			5.0	5.0	5.0						5.0	
Flash Dont Walk (s)			11.0	11.0	11.0						11.0	
Pedestrian Calls (#/hr)			0	0	0						0	
Act Effct Green (s)			22.2	22.2	22.2						55.2	
Actuated g/C Ratio			0.26	0.26	0.26						0.65	
v/c Ratio			0.64	0.47	0.20						0.69	
Control Delay			32.3	36.2	32.7						3.6	
Queue Delay			0.0	0.0	0.0						0.0	
Total Delay			32.3	36.2	32.7						3.6	
LOS			C	D	C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					34.6						3.6	
Approach LOS					C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 75 (88%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 10.6	Intersection LOS: B
Intersection Capacity Utilization 73.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 92: Swan & Oak

Lane Group	EBR	WBL	WBT	SBT
Lane Group Flow (vph)	472	217	183	2839
v/c Ratio	0.64	0.47	0.20	0.69
Control Delay	32.3	36.2	32.7	3.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	32.3	36.2	32.7	3.6
Queue Length 50th (ft)	125	83	36	74
Queue Length 95th (ft)	182	m130	m57	79
Internal Link Dist (ft)			279	252
Turn Bay Length (ft)				
Base Capacity (vph)	732	464	924	4140
Starvation Cap Reductn	0	0	0	124
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.64	0.47	0.20	0.71

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	115	150	60	70	0	0	0	0	15	1945	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.924									0.998	
Flt Protected					0.977							
Satd. Flow (prot)	0	1721	0	0	1820	0	0	0	0	0	5075	0
Flt Permitted					0.666							
Satd. Flow (perm)	0	1721	0	0	1241	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8									4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			458			685			413	
Travel Time (s)		10.0			10.4			15.6			9.4	
Peak Hour Factor	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)	0	128	167	67	78	0	0	0	0	17	2161	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	295	0	0	145	0	0	0	0	0	2206	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	0.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%
Maximum Green (s)		25.3		25.3	25.3					50.3	50.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		26.3			26.3						51.3	
Actuated g/C Ratio		0.31			0.31						0.60	
v/c Ratio		0.55			0.38						0.72	
Control Delay		28.3			23.6						4.4	
Queue Delay		0.0			0.0						0.0	
Total Delay		28.3			23.6						4.4	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		28.3			23.6						4.4	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 18 (21%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 93: Huron & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	295	145	2206
v/c Ratio	0.55	0.38	0.72
Control Delay	28.3	23.6	4.4
Queue Delay	0.0	0.0	0.0
Total Delay	28.3	23.6	4.4
Queue Length 50th (ft)	127	58	32
Queue Length 95th (ft)	206	112	35
Internal Link Dist (ft)	360	378	333
Turn Bay Length (ft)			
Base Capacity (vph)	538	384	3064
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.55	0.38	0.72

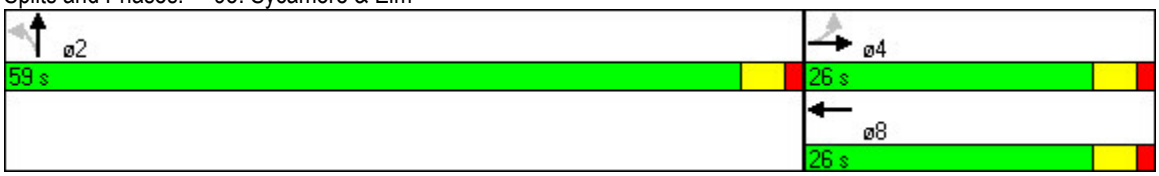
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	105	60	0	0	55	15	35	1470	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.971			0.998				
Flt Protected		0.969						0.999				
Satd. Flow (prot)	0	1805	0	0	1809	0	0	5070	0	0	0	0
Flt Permitted		0.766						0.999				
Satd. Flow (perm)	0	1427	0	0	1809	0	0	5070	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					16			6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		458			236			734			374	
Travel Time (s)		10.4			5.4			16.7			8.5	
Peak Hour Factor	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)	117	67	0	0	61	17	39	1633	28	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	184	0	0	78	0	0	1700	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.7	20.7			20.7		45.0	45.0				
Total Split (s)	26.0	26.0	0.0	0.0	26.0	0.0	59.0	59.0	0.0	0.0	0.0	0.0
Total Split (%)	30.6%	30.6%	0.0%	0.0%	30.6%	0.0%	69.4%	69.4%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	21.3	21.3			21.3		54.3	54.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		22.3			22.3			55.3				
Actuated g/C Ratio		0.26			0.26			0.65				
v/c Ratio		0.49			0.16			0.51				
Control Delay		39.4			20.9			6.0				
Queue Delay		0.0			0.0			0.0				
Total Delay		39.4			20.9			6.0				
LOS		D			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		39.4			20.9			6.0				
Approach LOS		D			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 68 (80%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 9.7	Intersection LOS: A
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 95: Sycamore & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	184	78	1700
v/c Ratio	0.49	0.16	0.51
Control Delay	39.4	20.9	6.0
Queue Delay	0.0	0.0	0.0
Total Delay	39.4	20.9	6.0
Queue Length 50th (ft)	99	25	119
Queue Length 95th (ft)	m163	60	130
Internal Link Dist (ft)	378	156	654
Turn Bay Length (ft)			
Base Capacity (vph)	374	486	3301
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.49	0.16	0.51

Intersection Summary

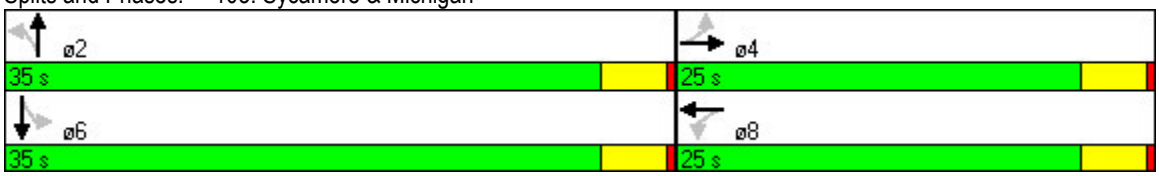
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	60	10	15	55	25	5	430	20	15	245	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.982			0.964			0.993			0.994	
Flt Protected		0.996			0.992			0.999			0.997	
Satd. Flow (prot)	0	1659	0	0	1652	0	0	3511	0	0	3440	0
Flt Permitted		0.986			0.962			0.952			0.925	
Satd. Flow (perm)	0	1643	0	0	1602	0	0	3346	0	0	3192	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			28			11			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		248			667			808			873	
Travel Time (s)		5.6			15.2			18.4			19.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	12%	12%	12%	10%	10%	10%	2%	2%	2%	4%	4%	4%
Adj. Flow (vph)	6	67	11	17	61	28	6	478	22	17	272	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	106	0	0	506	0	0	300	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	4.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.35			0.35			0.52			0.52	
v/c Ratio		0.14			0.18			0.29			0.18	
Control Delay		12.8			11.5			6.9			7.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.8			11.5			6.9			7.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		B			B			A			A	
Approach Delay		12.8			11.5			6.9			7.9	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 34.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: Sycamore & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	84	106	506	300
v/c Ratio	0.14	0.18	0.29	0.18
Control Delay	12.8	11.5	6.9	7.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.8	11.5	6.9	7.9
Queue Length 50th (ft)	18	19	37	26
Queue Length 95th (ft)	44	48	53	45
Internal Link Dist (ft)	168	587	728	793
Turn Bay Length (ft)				
Base Capacity (vph)	582	579	1734	1654
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.14	0.18	0.29	0.18

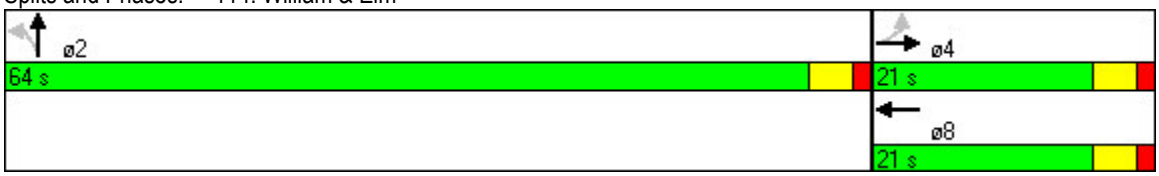
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	190	0	0	85	25	25	1420	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.966			0.998				
Flt Protected		0.992						0.999				
Satd. Flow (prot)	0	3511	0	0	3419	0	0	5070	0	0	0	0
Flt Permitted		0.892						0.999				
Satd. Flow (perm)	0	3157	0	0	3419	0	0	5070	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					28			4				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		371			191			308			461	
Travel Time (s)		8.4			4.3			7.0			10.5	
Peak Hour Factor	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)	39	211	0	0	94	28	28	1578	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	250	0	0	122	0	0	1623	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.0	21.0			21.0		48.0	48.0				
Total Split (s)	21.0	21.0	0.0	0.0	21.0	0.0	64.0	64.0	0.0	0.0	0.0	0.0
Total Split (%)	24.7%	24.7%	0.0%	0.0%	24.7%	0.0%	75.3%	75.3%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.3	16.3			16.3		59.3	59.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.7	3.7	3.0	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.3			17.3			60.3				
Actuated g/C Ratio		0.20			0.20			0.71				
v/c Ratio		0.39			0.17			0.45				
Control Delay		28.0			22.1			3.8				
Queue Delay		0.0			0.0			0.1				
Total Delay		28.0			22.1			3.9				
LOS		C			C			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		28.0			22.1			3.9				
Approach LOS		C			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 39 (46%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 8.0	Intersection LOS: A
Intersection Capacity Utilization 44.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 114: William & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	250	122	1623
v/c Ratio	0.39	0.17	0.45
Control Delay	28.0	22.1	3.8
Queue Delay	0.0	0.0	0.1
Total Delay	28.0	22.1	3.9
Queue Length 50th (ft)	51	21	31
Queue Length 95th (ft)	m77	44	39
Internal Link Dist (ft)	291	111	228
Turn Bay Length (ft)			
Base Capacity (vph)	643	718	3598
Starvation Cap Reductn	0	0	720
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.39	0.17	0.56

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	55	45	80	115	0	0	0	0	45	2060	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.932									0.999	
Flt Protected					0.980						0.999	
Satd. Flow (prot)	0	3299	0	0	3468	0	0	0	0	0	5075	0
Flt Permitted					0.797						0.999	
Satd. Flow (perm)	0	3299	0	0	2821	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		507			371			297			255	
Travel Time (s)		11.5			8.4			6.8			5.8	
Peak Hour Factor	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)	0	61	50	89	128	0	0	0	0	50	2289	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	217	0	0	0	0	0	2350	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					47.0	47.0	
Total Split (s)	0.0	26.0	0.0	26.0	26.0	0.0	0.0	0.0	0.0	59.0	59.0	0.0
Total Split (%)	0.0%	30.6%	0.0%	30.6%	30.6%	0.0%	0.0%	0.0%	0.0%	69.4%	69.4%	0.0%
Maximum Green (s)		21.3		21.3	21.3					54.3	54.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		22.3			22.3						55.3	
Actuated g/C Ratio		0.26			0.26						0.65	
v/c Ratio		0.13			0.29						0.71	
Control Delay		22.5			21.3						1.8	
Queue Delay		0.0			0.0						0.2	
Total Delay		22.5			21.3						2.0	
LOS		C			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		22.5			21.3						2.0	
Approach LOS		C			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 37 (44%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 4.4	Intersection LOS: A
Intersection Capacity Utilization 58.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 115: William & Oak

Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	111	217	2350
v/c Ratio	0.13	0.29	0.71
Control Delay	22.5	21.3	1.8
Queue Delay	0.0	0.0	0.2
Total Delay	22.5	21.3	2.0
Queue Length 50th (ft)	22	36	21
Queue Length 95th (ft)	42	55	23
Internal Link Dist (ft)	427	291	175
Turn Bay Length (ft)			
Base Capacity (vph)	872	740	3302
Starvation Cap Reductn	0	0	291
Spillback Cap Reductn	0	0	273
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.13	0.29	0.78

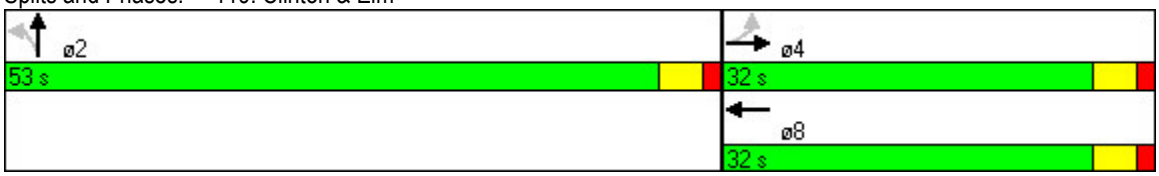
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	145	135	0	0	40	20	20	1300	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	1.00	1.00
Frt					0.946			0.998				
Flt Protected		0.973						0.999				
Satd. Flow (prot)	0	1824	0	0	1797	0	0	5026	0	0	0	0
Flt Permitted		0.770						0.999				
Satd. Flow (perm)	0	1444	0	0	1797	0	0	5026	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					37			3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			191			734			308	
Travel Time (s)		8.2			4.3			16.7			7.0	
Peak Hour Factor	0.68	0.78	0.90	0.90	0.73	0.54	0.58	0.94	0.58	0.90	0.90	0.90
Heavy Vehicles (%)	0%	3%	2%	2%	0%	0%	0%	3%	0%	2%	2%	2%
Adj. Flow (vph)	213	173	0	0	55	37	34	1383	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	386	0	0	92	0	0	1434	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	21.2	21.2			21.2		48.0	48.0				
Total Split (s)	32.0	32.0	0.0	0.0	32.0	0.0	53.0	53.0	0.0	0.0	0.0	0.0
Total Split (%)	37.6%	37.6%	0.0%	0.0%	37.6%	0.0%	62.4%	62.4%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	27.3	27.3			27.3		48.3	48.3				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	1.5	1.5			1.5		1.5	1.5				
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	2.7	2.7	3.0	3.0	2.7	3.0	2.7	2.7	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		29.3			29.3			50.3				
Actuated g/C Ratio		0.34			0.34			0.59				
v/c Ratio		0.78			0.14			0.48				
Control Delay		45.1			13.1			5.4				
Queue Delay		0.3			0.0			0.0				
Total Delay		45.4			13.1			5.5				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		D			B			A				
Approach Delay		45.4			13.1			5.5				
Approach LOS		D			B			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 31 (36%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 13.9	Intersection LOS: B
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 119: Clinton & Elm



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	386	92	1434
v/c Ratio	0.78	0.14	0.48
Control Delay	45.1	13.1	5.4
Queue Delay	0.3	0.0	0.0
Total Delay	45.4	13.1	5.5
Queue Length 50th (ft)	180	20	17
Queue Length 95th (ft)	232	39	26
Internal Link Dist (ft)	279	111	654
Turn Bay Length (ft)			
Base Capacity (vph)	498	644	2975
Starvation Cap Reductn	8	0	0
Spillback Cap Reductn	0	1	165
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.79	0.14	0.51

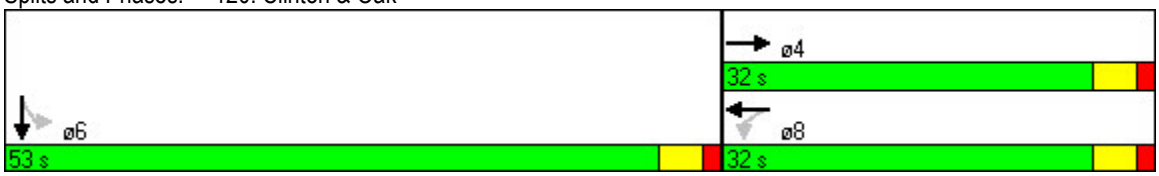
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	215	185	25	40	0	0	0	0	40	2125	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91
Frt		0.938									0.999	
Flt Protected					0.981						0.999	
Satd. Flow (prot)	0	1747	0	0	1827	0	0	0	0	0	5075	0
Flt Permitted					0.691						0.999	
Satd. Flow (perm)	0	1747	0	0	1287	0	0	0	0	0	5075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4									2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		520			359			762			297	
Travel Time (s)		11.8			8.2			17.3			6.8	
Peak Hour Factor	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)	0	239	206	28	44	0	0	0	0	44	2361	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	445	0	0	72	0	0	0	0	0	2422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		
Protected Phases		4			8						6	
Permitted Phases				8						6		
Minimum Split (s)		21.0		21.0	21.0					48.0	48.0	
Total Split (s)	0.0	32.0	0.0	32.0	32.0	0.0	0.0	0.0	0.0	53.0	53.0	0.0
Total Split (%)	0.0%	37.6%	0.0%	37.6%	37.6%	0.0%	0.0%	0.0%	0.0%	62.4%	62.4%	0.0%
Maximum Green (s)		27.3		27.3	27.3					48.3	48.3	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		1.5		1.5	1.5					1.5	1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.7	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.7	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0					0	0	
Act Effct Green (s)		28.3			28.3						49.3	
Actuated g/C Ratio		0.33			0.33						0.58	
v/c Ratio		0.76			0.17						0.82	
Control Delay		35.3			22.7						6.7	
Queue Delay		0.6			0.0						0.1	
Total Delay		35.9			22.7						6.8	
LOS		D			C						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		35.9			22.7						6.8	
Approach LOS		D			C						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 47 (55%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 120: Clinton & Oak



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	445	72	2422
v/c Ratio	0.76	0.17	0.82
Control Delay	35.3	22.7	6.7
Queue Delay	0.6	0.0	0.1
Total Delay	35.9	22.7	6.8
Queue Length 50th (ft)	208	31	31
Queue Length 95th (ft)	#350	69	34
Internal Link Dist (ft)	440	279	217
Turn Bay Length (ft)			
Base Capacity (vph)	584	428	2944
Starvation Cap Reductn	0	0	55
Spillback Cap Reductn	22	0	20
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.79	0.17	0.84

Intersection Summary

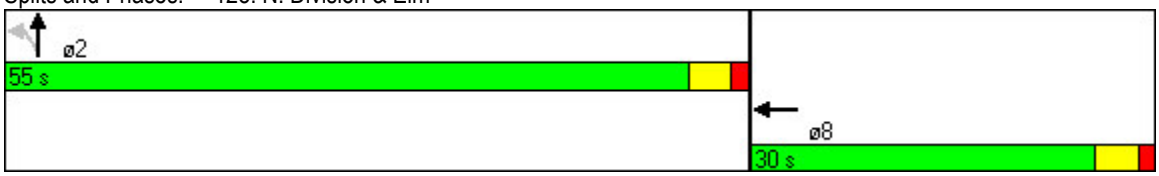
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	0	70	80	135	1215	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.920							
Flt Protected								0.995				
Satd. Flow (prot)	0	0	0	0	3256	0	0	5060	0	0	0	0
Flt Permitted								0.995				
Satd. Flow (perm)	0	0	0	0	3256	0	0	5060	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					55			40				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		349			195			317			734	
Travel Time (s)		7.9			4.4			7.2			16.7	
Peak Hour Factor	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)	0	0	0	0	78	89	150	1350	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	167	0	0	1500	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type							Perm					
Protected Phases					8			2				
Permitted Phases							2					
Minimum Split (s)					20.6		50.0	50.0				
Total Split (s)	0.0	0.0	0.0	0.0	30.0	0.0	55.0	55.0	0.0	0.0	0.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	0.0%	35.3%	0.0%	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)					25.4		50.4	50.4				
Yellow Time (s)					3.2		3.2	3.2				
All-Red Time (s)					1.4		1.4	1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.6	3.0	3.6	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)					5.0		5.0	5.0				
Flash Dont Walk (s)					11.0		11.0	11.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					26.4			51.4				
Actuated g/C Ratio					0.31			0.60				
v/c Ratio					0.16			0.49				
Control Delay					14.6			12.2				
Queue Delay					0.0			0.2				
Total Delay					14.6			12.5				
LOS					B			B				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					14.6			12.5				
Approach LOS					B			B				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 10 (12%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.49	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 37.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 128: N. Division & Elm



Lane Group	WBT	NBT
Lane Group Flow (vph)	167	1500
v/c Ratio	0.16	0.49
Control Delay	14.6	12.2
Queue Delay	0.0	0.2
Total Delay	14.6	12.5
Queue Length 50th (ft)	22	219
Queue Length 95th (ft)	45	127
Internal Link Dist (ft)	115	237
Turn Bay Length (ft)		
Base Capacity (vph)	1049	3076
Starvation Cap Reductn	0	700
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.16	0.63

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	65	75	0	0	0	0	0	2180	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91
Frt											0.998	
Flt Protected					0.977							
Satd. Flow (prot)	0	0	0	0	4968	0	0	0	0	0	5075	0
Flt Permitted					0.977							
Satd. Flow (perm)	0	0	0	0	4968	0	0	0	0	0	5075	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					3						3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		359			349			277			762	
Travel Time (s)		8.2			7.9			6.3			17.3	
Peak Hour Factor	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)	0	0	0	72	83	0	0	0	0	0	2422	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	155	0	0	0	0	0	2450	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.7	20.7						50.0	
Total Split (s)	0.0	0.0	0.0	33.0	33.0	0.0	0.0	0.0	0.0	0.0	52.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	38.8%	38.8%	0.0%	0.0%	0.0%	0.0%	0.0%	61.2%	0.0%
Maximum Green (s)				28.3	28.3						47.3	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.5	1.5						1.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.7	3.7	3.0	3.0	3.0	3.0	3.0	3.7	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					29.3						48.3	
Actuated g/C Ratio					0.34						0.57	
v/c Ratio					0.09						0.85	
Control Delay					16.6						7.3	
Queue Delay					0.0						0.0	
Total Delay					16.6						7.3	
LOS					B						A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					16.6						7.3	
Approach LOS					B						A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 66 (78%), Referenced to phase 6:SBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 7.9	Intersection LOS: A
Intersection Capacity Utilization 52.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 129: N. Division & Oak

Lane Group	← WBT	↓ SBT
Lane Group Flow (vph)	155	2450
v/c Ratio	0.09	0.85
Control Delay	16.6	7.3
Queue Delay	0.0	0.0
Total Delay	16.6	7.3
Queue Length 50th (ft)	20	47
Queue Length 95th (ft)	33	52
Internal Link Dist (ft)	269	682
Turn Bay Length (ft)		
Base Capacity (vph)	1714	2885
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.09	0.85

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	545	165	0	0	0	0	0	840	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	1.00	1.00
Frt								0.998				
Flt Protected	0.950	0.970										
Satd. Flow (prot)	1610	3288	0	0	0	0	0	5075	0	0	0	0
Flt Permitted	0.950	0.970										
Satd. Flow (perm)	1610	3288	0	0	0	0	0	5075	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	137	137						3				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		345			206			316			317	
Travel Time (s)		7.8			4.7			7.2			7.2	
Peak Hour Factor	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)	606	183	0	0	0	0	0	933	11	0	0	0
Shared Lane Traffic (%)	50%											
Lane Group Flow (vph)	303	486	0	0	0	0	0	944	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	21.0	21.0						50.0				
Total Split (s)	31.0	31.0	0.0	0.0	0.0	0.0	0.0	54.0	0.0	0.0	0.0	0.0
Total Split (%)	36.5%	36.5%	0.0%	0.0%	0.0%	0.0%	0.0%	63.5%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	26.4	26.4						49.4				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	1.4	1.4						1.4				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.6	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)	27.4	27.4						50.4				
Actuated g/C Ratio	0.32	0.32						0.59				
v/c Ratio	0.50	0.42						0.31				
Control Delay	10.6	8.1						3.8				
Queue Delay	0.8	0.0						0.1				
Total Delay	11.4	8.1						3.9				
LOS	B	A						A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.4						3.9				
Approach LOS		A						A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 5 (6%), Referenced to phase 2:NBT, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 6.4	Intersection LOS: A
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 135: S Division & Elm

Lane Group	EBL	EBT	NBT
Lane Group Flow (vph)	303	486	944
v/c Ratio	0.50	0.42	0.31
Control Delay	10.6	8.1	3.8
Queue Delay	0.8	0.0	0.1
Total Delay	11.4	8.1	3.9
Queue Length 50th (ft)	137	108	30
Queue Length 95th (ft)	225	156	35
Internal Link Dist (ft)		265	236
Turn Bay Length (ft)			
Base Capacity (vph)	612	1153	3010
Starvation Cap Reductn	110	0	865
Spillback Cap Reductn	4	2	159
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.60	0.42	0.44

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	620	395	0	0	0	0	0	0	90	2155	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	1.00
Frt			0.850									
Flt Protected											0.998	
Satd. Flow (prot)	0	5085	1583	0	0	0	0	0	0	0	6395	0
Flt Permitted											0.998	
Satd. Flow (perm)	0	5085	1583	0	0	0	0	0	0	0	6395	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			4								17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		208			345			332			277	
Travel Time (s)		4.7			7.8			7.5			6.3	
Peak Hour Factor	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)	0	689	439	0	0	0	0	0	0	100	2394	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	689	439	0	0	0	0	0	0	0	2494	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		20.8	20.8							50.0	50.0	
Total Split (s)	0.0	31.0	31.0	0.0	0.0	0.0	0.0	0.0	0.0	54.0	54.0	0.0
Total Split (%)	0.0%	36.5%	36.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	63.5%	63.5%	0.0%
Maximum Green (s)		26.2	26.2							49.2	49.2	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.6	1.6							1.6	1.6	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.0	3.8	3.8	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		27.2	27.2								50.2	
Actuated g/C Ratio		0.32	0.32								0.59	
v/c Ratio		0.42	0.86								0.66	
Control Delay		23.7	45.9								1.3	
Queue Delay		0.0	0.0								0.4	
Total Delay		23.7	45.9								1.7	
LOS		C	D								A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		32.4									1.7	
Approach LOS		C									A	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 72 (85%), Referenced to phase 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 11.2	Intersection LOS: B
Intersection Capacity Utilization 63.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 136: S Division & Oak

Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	689	439	2494
v/c Ratio	0.42	0.86	0.66
Control Delay	23.7	45.9	1.3
Queue Delay	0.0	0.0	0.4
Total Delay	23.7	45.9	1.7
Queue Length 50th (ft)	105	216	11
Queue Length 95th (ft)	138	#386	12
Internal Link Dist (ft)	128		197
Turn Bay Length (ft)			
Base Capacity (vph)	1627	509	3784
Starvation Cap Reductn	0	0	653
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.42	0.86	0.80

Intersection Summary

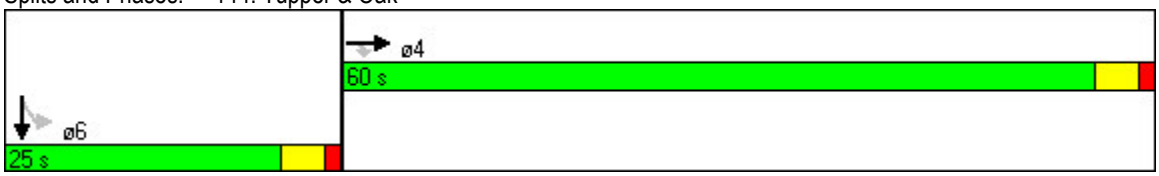
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1600	255	0	0	0	0	0	0	275	500	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt			0.850									
Flt Protected											0.983	
Satd. Flow (prot)	0	3539	1583	0	0	0	0	0	0	0	3479	0
Flt Permitted											0.983	
Satd. Flow (perm)	0	3539	1583	0	0	0	0	0	0	0	3479	0
Right Turn on Red			Yes			Yes			Yes	Yes		Yes
Satd. Flow (RTOR)			57								29	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		351			380			611			685	
Travel Time (s)		8.0			8.6			13.9			15.6	
Peak Hour Factor	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)	0	1778	283	0	0	0	0	0	0	306	556	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1778	283	0	0	0	0	0	0	0	862	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type			Perm							Perm		
Protected Phases		4									6	
Permitted Phases			4							6		
Minimum Split (s)		45.0	45.0							20.6	20.6	
Total Split (s)	0.0	60.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	0.0
Total Split (%)	0.0%	70.6%	70.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29.4%	29.4%	0.0%
Maximum Green (s)		55.4	55.4							20.4	20.4	
Yellow Time (s)		3.2	3.2							3.2	3.2	
All-Red Time (s)		1.4	1.4							1.4	1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.6	3.6	3.0	3.0	3.0	3.0	3.0	3.0	3.6	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0	5.0							5.0	5.0	
Flash Dont Walk (s)		11.0	11.0							11.0	11.0	
Pedestrian Calls (#/hr)		0	0							0	0	
Act Effct Green (s)		56.4	56.4								21.4	
Actuated g/C Ratio		0.66	0.66								0.25	
v/c Ratio		0.76	0.26								0.96	
Control Delay		13.7	4.0								44.6	
Queue Delay		0.5	0.4								0.0	
Total Delay		14.2	4.3								44.6	
LOS		B	A								D	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		12.8									44.6	
Approach LOS		B									D	

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 4:EBT, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 22.2	Intersection LOS: C
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 144: Tupper & Oak



Lane Group	EBT	EBR	SBT
Lane Group Flow (vph)	1778	283	862
v/c Ratio	0.76	0.26	0.96
Control Delay	13.7	4.0	44.6
Queue Delay	0.5	0.4	0.0
Total Delay	14.2	4.3	44.6
Queue Length 50th (ft)	408	16	165
Queue Length 95th (ft)	m501	m34	m#276
Internal Link Dist (ft)	271		605
Turn Bay Length (ft)			
Base Capacity (vph)	2348	1070	898
Starvation Cap Reductn	202	389	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.83	0.42	0.96

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	1240	10	0	0	0	0	160	195	175	185	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor		1.00										
Frt		0.998						0.960	0.850			
Flt Protected		0.999									0.980	
Satd. Flow (prot)	0	5156	0	0	0	0	0	1687	1504	0	2729	0
Flt Permitted		0.999									0.647	
Satd. Flow (perm)	0	5156	0	0	0	0	0	1687	1504	0	1802	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4						23	43			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	30	1476	20	0	0	0	0	182	291	254	370	0
Shared Lane Traffic (%)									23%			
Lane Group Flow (vph)	0	1526	0	0	0	0	0	249	224	0	624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	35.3%	35.3%	35.3%	0.0%
Maximum Green (s)	50.4	50.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		52.4						27.4	27.4		27.4	
Actuated g/C Ratio		0.62						0.32	0.32		0.32	
v/c Ratio		0.48						0.45	0.44		1.07	
Control Delay		5.0						23.6	21.3		92.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.1						0.0	0.0		0.0	
Total Delay		5.1						23.6	21.3		92.0	
LOS		A						C	C		F	
Approach Delay		5.1						22.5			92.0	
Approach LOS		A						C			F	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 38 (45%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 1.07	
Intersection Signal Delay: 28.9	Intersection LOS: C
Intersection Capacity Utilization 57.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 145: Tupper & Ellicott

Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	1526	249	224	624
v/c Ratio	0.48	0.45	0.44	1.07
Control Delay	5.0	23.6	21.3	92.0
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	5.1	23.6	21.3	92.0
Queue Length 50th (ft)	51	98	77	~164
Queue Length 95th (ft)	59	165	94	108
Internal Link Dist (ft)	262	271		652
Turn Bay Length (ft)				
Base Capacity (vph)	3180	559	514	581
Starvation Cap Reductn	411	0	0	0
Spillback Cap Reductn	583	2	5	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.59	0.45	0.44	1.07

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	1185	75	0	0	0	0	150	85	155	200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988							0.850			
Flt Protected		0.999								0.950		
Satd. Flow (prot)	0	5074	0	0	0	0	0	1900	1615	1787	1863	0
Flt Permitted		0.999								0.543		
Satd. Flow (perm)	0	5074	0	0	0	0	0	1900	1615	1021	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30							63			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		288			342			356			718	
Travel Time (s)		6.5			7.8			8.1			16.3	
Peak Hour Factor	0.50	0.90	0.67	0.90	0.90	0.90	0.90	0.80	0.94	0.76	0.73	0.90
Heavy Vehicles (%)	0%	1%	0%	2%	2%	2%	2%	0%	0%	1%	2%	2%
Adj. Flow (vph)	20	1317	112	0	0	0	0	188	90	204	274	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1449	0	0	0	0	0	188	90	204	274	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	55.0	55.0	0.0	0.0	0.0	0.0	0.0	30.0	30.0	30.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	0.0%	0.0%	0.0%	35.3%	35.3%	35.3%	35.3%	0.0%
Maximum Green (s)	50.4	50.4						25.4	25.4	25.4	25.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-1.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	3.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		52.4						27.4	26.4	27.4	27.4	
Actuated g/C Ratio		0.62						0.32	0.31	0.32	0.32	
v/c Ratio		0.46						0.31	0.17	0.62	0.46	
Control Delay		0.5						23.4	9.7	47.8	39.4	
Queue Delay		0.0						0.0	0.0	0.0	0.0	
Total Delay		0.5						23.4	9.7	47.8	39.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A						C	A	D	D	
Approach Delay		0.5						19.0			43.0	
Approach LOS		A						B			D	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 31 (36%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 12.1	Intersection LOS: B
Intersection Capacity Utilization 51.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 146: Tupper & Washington

Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1449	188	90	204	274
v/c Ratio	0.46	0.31	0.17	0.62	0.46
Control Delay	0.5	23.4	9.7	47.8	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	0.5	23.4	9.7	47.8	39.4
Queue Length 50th (ft)	0	75	10	110	144
Queue Length 95th (ft)	0	112	43	151	175
Internal Link Dist (ft)	208	276			638
Turn Bay Length (ft)					
Base Capacity (vph)	3139	612	545	329	601
Starvation Cap Reductn	230	0	0	0	0
Spillback Cap Reductn	18	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.50	0.31	0.17	0.62	0.46

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	1390	0	0	0	0	0	290	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt								0.992				
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3511	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3511	0	0	0	0
Right Turn on Red	Yes		Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1						6				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		380			319			560			585	
Travel Time (s)		8.6			7.3			12.7			13.3	
Peak Hour Factor	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)	6	1544	0	0	0	0	0	322	17	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1550	0	0	0	0	0	339	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm											
Protected Phases		4						2				
Permitted Phases	4											
Minimum Split (s)	45.0	45.0						21.2				
Total Split (s)	59.0	59.0	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.0	0.0	0.0
Total Split (%)	69.4%	69.4%	0.0%	0.0%	0.0%	0.0%	0.0%	30.6%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	53.8	53.8						20.8				
Yellow Time (s)	3.2	3.2						3.2				
All-Red Time (s)	2.0	2.0						2.0				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	4.2	4.2	3.0	3.0	3.0	3.0	3.0	4.2	3.0	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0				
Flash Dont Walk (s)	11.0	11.0						11.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		54.8						21.8				
Actuated g/C Ratio		0.64						0.26				
v/c Ratio		0.68						0.37				
Control Delay		5.0						20.9				
Queue Delay		0.5						0.0				
Total Delay		5.6						20.9				
LOS		A						C				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		5.6						20.9				
Approach LOS		A						C				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 8.3	Intersection LOS: A
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 152: Tupper & Elm St

Lane Group	EBT	NBT
Lane Group Flow (vph)	1550	339
v/c Ratio	0.68	0.37
Control Delay	5.0	20.9
Queue Delay	0.5	0.0
Total Delay	5.6	20.9
Queue Length 50th (ft)	103	38
Queue Length 95th (ft)	m115	70
Internal Link Dist (ft)	300	480
Turn Bay Length (ft)		
Base Capacity (vph)	2282	905
Starvation Cap Reductn	317	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.79	0.37

Intersection Summary

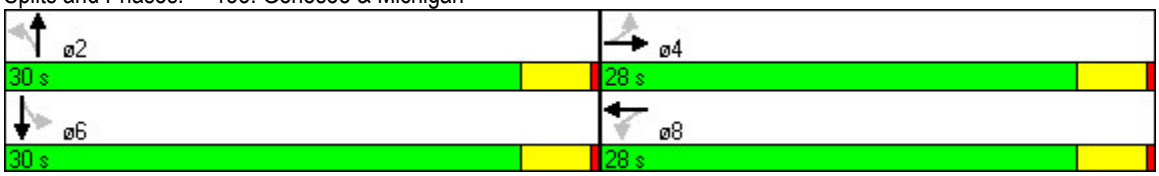
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	135	20	10	100	25	10	330	30	55	210	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Frt		0.984			0.975			0.988			0.985	
Flt Protected		0.992			0.996			0.999			0.991	
Satd. Flow (prot)	0	3455	0	0	1809	0	0	3493	0	0	3455	0
Flt Permitted		0.907			0.980			0.946			0.839	
Satd. Flow (perm)	0	3159	0	0	1780	0	0	3308	0	0	2925	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			25			21			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		518			1157			873			441	
Travel Time (s)		11.8			26.3			19.8			10.0	
Peak Hour Factor	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)	33	150	22	11	111	28	11	367	33	61	233	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	205	0	0	150	0	0	411	0	0	327	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.0	28.0		28.0	28.0		30.0	30.0		30.0	30.0	
Total Split (s)	28.0	28.0	0.0	28.0	28.0	0.0	30.0	30.0	0.0	30.0	30.0	0.0
Total Split (%)	48.3%	48.3%	0.0%	48.3%	48.3%	0.0%	51.7%	51.7%	0.0%	51.7%	51.7%	0.0%
Maximum Green (s)	24.0	24.0		24.0	24.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		25.0			25.0			27.0			27.0	
Actuated g/C Ratio		0.43			0.43			0.47			0.47	
v/c Ratio		0.15			0.19			0.26			0.24	
Control Delay		9.3			9.3			9.5			9.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.3			9.3			9.5			9.0	
LOS		A			A			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.3			9.3			9.5			9.0	
Approach LOS		A			A			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.26	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 44.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 155: Genesee & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	205	150	411	327
v/c Ratio	0.15	0.19	0.26	0.24
Control Delay	9.3	9.3	9.5	9.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.3	9.3	9.5	9.0
Queue Length 50th (ft)	18	25	40	30
Queue Length 95th (ft)	36	55	65	52
Internal Link Dist (ft)	438	1077	793	361
Turn Bay Length (ft)				
Base Capacity (vph)	1374	781	1551	1377
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.19	0.26	0.24

Intersection Summary

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	155	500	105	15	5	45	280	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	
Flt Protected		0.988				0.983		
Satd. Flow (prot)	0	5049	1538	0	0	1742	2731	0
Flt Permitted		0.988				0.983		
Satd. Flow (perm)	0	5049	1538	0	0	1742	2731	0
Right Turn on Red								Yes
Satd. Flow (RTOR)							50	
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	191	575	114	21	8	55	311	114
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	766	114	0	0	84	425	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	
Total Split (s)	60.0	60.0	60.0	25.0	25.0	25.0	25.0	0.0
Total Split (%)	70.6%	70.6%	70.6%	29.4%	29.4%	29.4%	29.4%	0.0%
Maximum Green (s)	55.4	55.4	55.4	20.4	20.4	20.4	20.4	
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	3.5
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	
Act Effct Green (s)		55.4	55.4			20.9	20.9	
Actuated g/C Ratio		0.65	0.65			0.25	0.25	
v/c Ratio		0.23	0.11			0.20	0.60	
Control Delay		9.1	8.5			16.8	29.0	
Queue Delay		0.5	0.0			0.0	0.0	
Total Delay		9.6	8.5			16.8	29.0	

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		A	A			B	C	
Approach Delay		9.4				16.8		
Approach LOS		A				B		

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 8 (9%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 39.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 159: Pearl & Main

Lane Group	WBT	WBR	NBT	SBR
Lane Group Flow (vph)	766	114	84	425
v/c Ratio	0.23	0.11	0.20	0.60
Control Delay	9.1	8.5	16.8	29.0
Queue Delay	0.5	0.0	0.0	0.0
Total Delay	9.6	8.5	16.8	29.0
Queue Length 50th (ft)	70	27	36	100
Queue Length 95th (ft)	m82	m46	66	153
Internal Link Dist (ft)	206		625	
Turn Bay Length (ft)				
Base Capacity (vph)	3291	1002	428	709
Starvation Cap Reductn	1950	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.57	0.11	0.20	0.60

Intersection Summary

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

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	85	1310	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00
Frt						
Flt Protected		0.997				
Satd. Flow (prot)	0	5070	0	0	1863	0
Flt Permitted		0.997				
Satd. Flow (perm)	0	5070	0	0	1863	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		161	288		705	
Travel Time (s)		3.7	6.5		16.0	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	94	1456	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1550	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Turn Type	Perm					
Protected Phases		4			6	
Permitted Phases	4					
Minimum Split (s)	40.0	40.0			20.6	
Total Split (s)	55.0	55.0	0.0	0.0	30.0	0.0
Total Split (%)	64.7%	64.7%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)	50.4	50.4			25.4	
Yellow Time (s)	3.2	3.2			3.2	
All-Red Time (s)	1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.6	3.6	3.0	3.0	3.6	3.0
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)	5.0	5.0			5.0	
Flash Dont Walk (s)	11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0			0	
Act Effct Green (s)		51.4				
Actuated g/C Ratio		0.60				
v/c Ratio		0.51				
Control Delay		10.3				
Queue Delay		0.0				
Total Delay		10.3				
LOS		B				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Approach Delay		10.3				
Approach LOS		B				

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 24 (28%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 30.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 160: Tupper & Main

Lane Group	EBT
Lane Group Flow (vph)	1550
v/c Ratio	0.51
Control Delay	10.3
Queue Delay	0.0
Total Delay	10.3
Queue Length 50th (ft)	156
Queue Length 95th (ft)	191
Internal Link Dist (ft)	81
Turn Bay Length (ft)	
Base Capacity (vph)	3066
Starvation Cap Reductn	0
Spillback Cap Reductn	0
Storage Cap Reductn	0
Reduced v/c Ratio	0.51

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	115	545	245	40	230	0	0	880	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.959						0.971	
Flt Protected					0.994		0.950					
Satd. Flow (prot)	0	0	0	0	6108	0	1770	1863	0	0	3437	0
Flt Permitted					0.994		0.200					
Satd. Flow (perm)	0	0	0	0	6108	0	373	1863	0	0	3437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					176						31	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	128	606	272	44	256	0	0	978	239
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1006	0	44	256	0	0	1217	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	50.0	50.0	0.0	15.0	50.0	0.0	0.0	20.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	58.8%	58.8%	0.0%	17.6%	58.8%	0.0%	0.0%	23.5%	0.0%
Maximum Green (s)				46.0	46.0		11.0				16.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

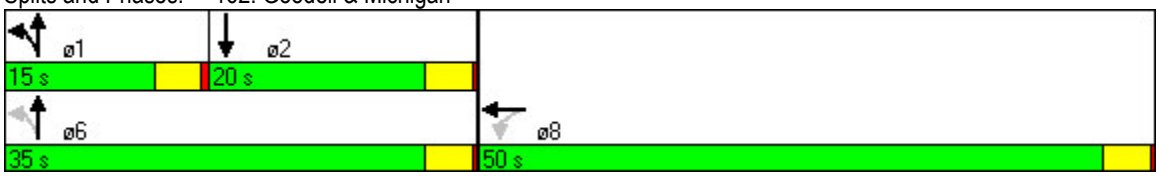
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	35.0
Total Split (%)	41%
Maximum Green (s)	31.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					47.0		31.6	31.6			17.0	
Actuated g/C Ratio					0.56		0.37	0.37			0.20	
v/c Ratio					0.29		0.13	0.37			1.70	
Control Delay					8.3		18.0	21.1			347.6	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					8.3		18.0	21.1			347.6	
LOS					A		B	C			F	
Approach Delay					8.3			20.7			347.6	
Approach LOS					A			C			F	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 84.6
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.70
Intersection Signal Delay: 173.5 — Intersection LOS: F
Intersection Capacity Utilization 61.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 162: Goodell & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	1006	44	256	1217
v/c Ratio	0.29	0.13	0.37	1.70
Control Delay	8.3	18.0	21.1	347.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.3	18.0	21.1	347.6
Queue Length 50th (ft)	62	15	97	~509
Queue Length 95th (ft)	80	36	158	#639
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	3470	338	704	715
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.13	0.36	1.70

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	15	705	175	90	120	0	0	285	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.99							
Frt					0.970						0.984	
Flt Protected					0.999			0.978				
Satd. Flow (prot)	0	0	0	0	6250	0	0	1825	0	0	1833	0
Flt Permitted					0.999			0.498				
Satd. Flow (perm)	0	0	0	0	6250	0	0	929	0	0	1833	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					136						9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		326			375			732			791	
Travel Time (s)		7.4			8.5			16.6			18.0	
Confl. Peds. (#/hr)						3						
Peak Hour Factor	0.90	0.90	0.90	0.50	0.85	0.83	0.78	0.88	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	1%	0%	4%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	30	829	211	115	136	0	0	317	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1070	0	0	251	0	0	361	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Minimum Split (s)				40.0	40.0		25.0	25.0			20.6	
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	30.0	30.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	35.3%	35.3%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				50.4	50.4		25.4	25.4			25.4	
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)					52.4			27.4			26.4	
Actuated g/C Ratio					0.62			0.32			0.31	
v/c Ratio					0.27			0.84			0.63	
Control Delay					2.8			41.8			30.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0			0.0			0.0	
Total Delay					2.8			41.8			30.2	
LOS					A			D			C	
Approach Delay					2.8			41.8			30.2	
Approach LOS					A			D			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 43 (51%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 14.5	Intersection LOS: B
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 163: Goodell & Ellicott

Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	1070	251	361
v/c Ratio	0.27	0.84	0.63
Control Delay	2.8	41.8	30.2
Queue Delay	0.0	0.0	0.0
Total Delay	2.8	41.8	30.2
Queue Length 50th (ft)	17	53	160
Queue Length 95th (ft)	20	#224	252
Internal Link Dist (ft)	295	652	711
Turn Bay Length (ft)			
Base Capacity (vph)	3905	299	576
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.27	0.84	0.63

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	30	515	10	95	285	0	0	240	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997							0.850
Flt Protected					0.997			0.986				
Satd. Flow (prot)	0	0	0	0	6363	0	0	1787	0	0	1792	1429
Flt Permitted					0.997			0.648				
Satd. Flow (perm)	0	0	0	0	6363	0	0	1174	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					7							26
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	33	579	11	127	317	0	0	276	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	623	0	0	444	0	0	276	26
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	55.0	55.0	0.0	30.0	30.0	0.0	0.0	30.0	30.0
Total Split (%)	0.0%	0.0%	0.0%	64.7%	64.7%	0.0%	35.3%	35.3%	0.0%	0.0%	35.3%	35.3%
Maximum Green (s)				50.4	50.4		25.4	25.4			25.4	25.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					52.4			27.4			27.4	27.4
Actuated g/C Ratio					0.62			0.32			0.32	0.32
v/c Ratio					0.16			1.17			0.48	0.05
Control Delay					3.9			127.6			26.5	8.4
Queue Delay					0.0			0.0			0.0	0.0
Total Delay					3.9			127.6			26.5	8.4

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			F			C	A
Approach Delay					3.9			127.6			24.9	
Approach LOS					A			F			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 48.6	Intersection LOS: D
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 164: Goodell & Washington

Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	623	444	276	26
v/c Ratio	0.16	1.17	0.48	0.05
Control Delay	3.9	127.6	26.5	8.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.9	127.6	26.5	8.4
Queue Length 50th (ft)	20	~293	117	0
Queue Length 95th (ft)	m24	#477	181	7
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3925	378	578	478
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	1.17	0.48	0.05

Intersection Summary

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

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	330	95	55	135	0	0	0	0	35	1950	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.91	0.91	1.00
Frt		0.966										0.850
Flt Protected					0.986						0.999	
Satd. Flow (prot)	0	3419	0	0	3490	0	0	0	0	0	5080	1583
Flt Permitted					0.736						0.999	
Satd. Flow (perm)	0	3419	0	0	2605	0	0	0	0	0	5080	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8										156
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			465			349			422	
Travel Time (s)		3.8			10.6			7.9			9.6	
Peak Hour Factor	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)	0	367	106	61	150	0	0	0	0	39	2167	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	473	0	0	211	0	0	0	0	0	2206	156
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm						Perm		Perm
Protected Phases		4			8						6	
Permitted Phases				8						6		6
Minimum Split (s)		20.9		20.9	20.9					47.0	47.0	47.0
Total Split (s)	0.0	30.0	0.0	30.0	30.0	0.0	0.0	0.0	0.0	55.0	55.0	55.0
Total Split (%)	0.0%	35.3%	0.0%	35.3%	35.3%	0.0%	0.0%	0.0%	0.0%	64.7%	64.7%	64.7%
Maximum Green (s)		25.1		25.1	25.1					50.1	50.1	50.1
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	3.2
All-Red Time (s)		1.7		1.7	1.7					1.7	1.7	1.7
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.9	3.0	3.9	3.9	3.0	3.0	3.0	3.0	3.9	3.9	3.9
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		5.0		5.0	5.0					5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0					11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0					0	0	0
Act Effct Green (s)		26.1			26.1						51.1	51.1
Actuated g/C Ratio		0.31			0.31						0.60	0.60
v/c Ratio		0.45			0.26						0.72	0.15
Control Delay		24.9			15.3						19.0	4.3
Queue Delay		0.0			0.0						0.0	0.0
Total Delay		24.9			15.3						19.0	4.3
LOS		C			B						B	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		24.9			15.3						18.1	
Approach LOS		C			B						B	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Green, Master Intersection	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 65.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 312: Genesee & Oak

Lane Group	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	473	211	2206	156
v/c Ratio	0.45	0.26	0.72	0.15
Control Delay	24.9	15.3	19.0	4.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	24.9	15.3	19.0	4.3
Queue Length 50th (ft)	104	27	334	9
Queue Length 95th (ft)	148	m42	m385	m35
Internal Link Dist (ft)	89	385	342	
Turn Bay Length (ft)				
Base Capacity (vph)	1055	800	3054	1014
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.45	0.26	0.72	0.15

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	95	0	0	125	20	50	1850	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		200	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Lane Util. Factor	0.95	0.95	1.00	1.00	0.95	0.95	0.91	0.91	1.00	1.00	1.00	1.00
Frt					0.980				0.850			
Flt Protected		0.974						0.999				
Satd. Flow (prot)	0	3447	0	0	3468	0	0	5080	1583	0	0	0
Flt Permitted		0.734						0.999				
Satd. Flow (perm)	0	2598	0	0	3468	0	0	5080	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11				56			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		465			518			458			260	
Travel Time (s)		10.6			11.8			10.4			5.9	
Peak Hour Factor	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)	122	106	0	0	139	22	56	2056	56	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	228	0	0	161	0	0	2112	56	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm		Perm			
Protected Phases		4			8			2				
Permitted Phases	4						2		2			
Minimum Split (s)	24.0	24.0			24.0		42.0	42.0	42.0			
Total Split (s)	29.0	29.0	0.0	0.0	29.0	0.0	56.0	56.0	56.0	0.0	0.0	0.0
Total Split (%)	34.1%	34.1%	0.0%	0.0%	34.1%	0.0%	65.9%	65.9%	65.9%	0.0%	0.0%	0.0%
Maximum Green (s)	24.2	24.2			24.2		51.2	51.2	51.2			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	1.6	1.6			1.6		1.6	1.6	1.6			
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.8	3.8	3.0	3.0	3.8	3.0	3.8	3.8	3.8	3.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0	5.0			
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0	11.0			
Pedestrian Calls (#/hr)	0	0			0		0	0	0			
Act Effct Green (s)		25.2			25.2			52.2	52.2			
Actuated g/C Ratio		0.30			0.30			0.61	0.61			
v/c Ratio		0.30			0.16			0.68	0.06			
Control Delay		7.9			21.0			8.6	0.1			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0	0.0			
Total Delay		7.9			21.0			8.6	0.1			
LOS		A			C			A	A			
Approach Delay		7.9			21.0			8.4				
Approach LOS		A			C			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 4 (5%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 56.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 313: Genesee & Elm St

Lane Group	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	228	161	2112	56
v/c Ratio	0.30	0.16	0.68	0.06
Control Delay	7.9	21.0	8.6	0.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.9	21.0	8.6	0.1
Queue Length 50th (ft)	12	31	353	0
Queue Length 95th (ft)	m17	54	391	m0
Internal Link Dist (ft)	385	438	378	
Turn Bay Length (ft)				200
Base Capacity (vph)	770	1036	3120	994
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.30	0.16	0.68	0.06

Intersection Summary

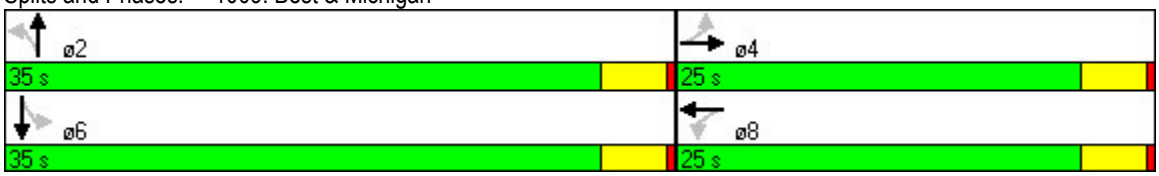
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	250	25	15	120	15	5	155	20	20	80	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.986			0.985			0.993	
Flt Protected		0.999			0.995			0.999			0.991	
Satd. Flow (prot)	0	1839	0	0	1827	0	0	1833	0	0	1833	0
Flt Permitted		0.996			0.959			0.995			0.944	
Satd. Flow (perm)	0	1833	0	0	1761	0	0	1826	0	0	1746	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			11			16			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		964			349			643			576	
Travel Time (s)		21.9			7.9			14.6			13.1	
Peak Hour Factor	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)	6	278	28	17	133	17	6	172	22	22	89	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312	0	0	167	0	0	200	0	0	117	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	0.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	0.0%
Maximum Green (s)	21.0	21.0		21.0	21.0		31.0	31.0		31.0	31.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.0			22.0			32.0			32.0	
Actuated g/C Ratio		0.37			0.37			0.53			0.53	
v/c Ratio		0.46			0.26			0.20			0.13	
Control Delay		16.8			13.7			7.4			7.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.8			13.7			7.4			7.1	
LOS		B			B			A			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		16.8			13.7			7.4			7.1	
Approach LOS		B			B			A			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 37.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1009: Best & Michigan



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	312	167	200	117
v/c Ratio	0.46	0.26	0.20	0.13
Control Delay	16.8	13.7	7.4	7.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.8	13.7	7.4	7.1
Queue Length 50th (ft)	81	38	31	18
Queue Length 95th (ft)	143	77	61	39
Internal Link Dist (ft)	884	269	563	496
Turn Bay Length (ft)				
Base Capacity (vph)	678	653	981	934
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.46	0.26	0.20	0.13

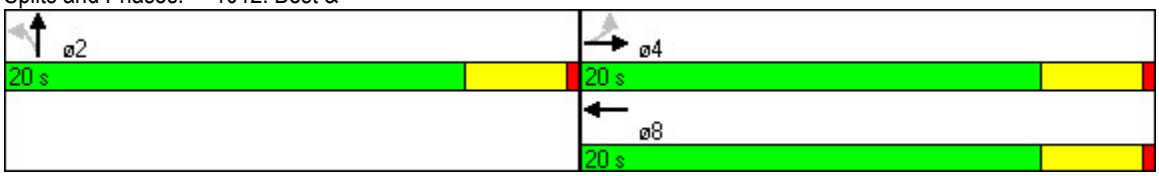
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	260	0	0	105	30	50	65	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Frt					0.970			0.954				
Flt Protected		0.998						0.985				
Satd. Flow (prot)	0	1859	0	0	1807	0	0	3326	0	0	0	0
Flt Permitted		0.991						0.985				
Satd. Flow (perm)	0	1846	0	0	1807	0	0	3326	0	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					33			56				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		178			964			653			187	
Travel Time (s)		4.0			21.9			14.8			4.3	
Peak Hour Factor	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)	11	289	0	0	117	33	56	72	56	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	300	0	0	150	0	0	184	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm					
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	20.0	20.0			20.0		20.0	20.0				
Total Split (s)	20.0	20.0	0.0	0.0	20.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0
Total Split (%)	50.0%	50.0%	0.0%	0.0%	50.0%	0.0%	50.0%	50.0%	0.0%	0.0%	0.0%	0.0%
Maximum Green (s)	16.0	16.0			16.0		16.0	16.0				
Yellow Time (s)	3.5	3.5			3.5		3.5	3.5				
All-Red Time (s)	0.5	0.5			0.5		0.5	0.5				
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0			5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0			0		0	0				
Act Effct Green (s)		17.0			17.0			17.0				
Actuated g/C Ratio		0.42			0.42			0.42				
v/c Ratio		0.38			0.19			0.13				
Control Delay		9.7			6.6			5.4				
Queue Delay		0.0			0.0			0.0				
Total Delay		9.7			6.6			5.4				
LOS		A			A			A				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.7			6.6			5.4				
Approach LOS		A			A			A				

Intersection Summary	
Area Type:	Other
Cycle Length: 40	
Actuated Cycle Length: 40	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.38	
Intersection Signal Delay: 7.7	Intersection LOS: A
Intersection Capacity Utilization 33.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1012: Best &



Lane Group	EBT	WBT	NBT
Lane Group Flow (vph)	300	150	184
v/c Ratio	0.38	0.19	0.13
Control Delay	9.7	6.6	5.4
Queue Delay	0.0	0.0	0.0
Total Delay	9.7	6.6	5.4
Queue Length 50th (ft)	42	15	8
Queue Length 95th (ft)	84	38	20
Internal Link Dist (ft)	98	884	573
Turn Bay Length (ft)			
Base Capacity (vph)	785	787	1446
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.38	0.19	0.13

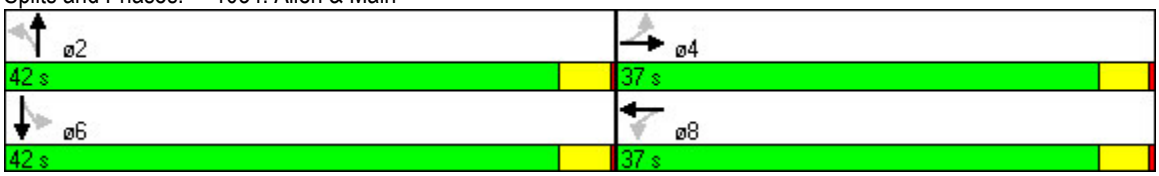
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	15	95	5	20	5	75	475	5	5	260	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.927			0.976			0.999			0.964	
Flt Protected		0.982			0.991			0.993			0.999	
Satd. Flow (prot)	0	1696	0	0	1802	0	0	5045	0	0	3408	0
Flt Permitted		0.891			0.964			0.838			0.948	
Satd. Flow (perm)	0	1539	0	0	1753	0	0	4257	0	0	3234	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		93			6			2			76	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		319			288			287			353	
Travel Time (s)		7.3			6.5			6.5			8.0	
Peak Hour Factor	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)	72	17	106	6	22	6	83	528	6	6	289	94
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	195	0	0	34	0	0	617	0	0	389	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	37.0	37.0	0.0	37.0	37.0	0.0	42.0	42.0	0.0	42.0	42.0	0.0
Total Split (%)	46.8%	46.8%	0.0%	46.8%	46.8%	0.0%	53.2%	53.2%	0.0%	53.2%	53.2%	0.0%
Maximum Green (s)	33.0	33.0		33.0	33.0		38.0	38.0		38.0	38.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	0.0	-1.0	0.0	0.0	0.0	-1.0	-1.0	0.0	0.0	-1.0	-1.0
Total Lost Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	3.0	3.0	4.0	4.0	3.0	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		33.0			33.0			39.0			39.0	
Actuated g/C Ratio		0.42			0.42			0.49			0.49	
v/c Ratio		0.28			0.05			0.29			0.24	
Control Delay		9.2			12.2			12.3			9.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.2			12.2			12.3			9.5	
LOS		A			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.2			12.2			12.3			9.5	
Approach LOS		A			B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 79	
Actuated Cycle Length: 79	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.29	
Intersection Signal Delay: 10.9	Intersection LOS: B
Intersection Capacity Utilization 47.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1034: Allen & Main



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	195	34	617	389
v/c Ratio	0.28	0.05	0.29	0.24
Control Delay	9.2	12.2	12.3	9.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.2	12.2	12.3	9.5
Queue Length 50th (ft)	30	8	62	43
Queue Length 95th (ft)	73	24	85	68
Internal Link Dist (ft)	239	208	207	273
Turn Bay Length (ft)				
Base Capacity (vph)	697	736	2103	1635
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.05	0.29	0.24

Intersection Summary

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	315	1625	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.88	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected						
Satd. Flow (prot)	3539	2787	0	0	0	0
Flt Permitted						
Satd. Flow (perm)	3539	2787	0	0	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	260			560	477	
Travel Time (s)	5.9			12.7	10.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	350	1806	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	350	1806	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.2%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	1405	0	0	0	0	1625
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Frt						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Link Speed (mph)	30			30	30	
Link Distance (ft)	319			969	284	
Travel Time (s)	7.3			22.0	6.5	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	1561	0	0	0	0	1806
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1561	0	0	0	0	1806
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 102.4%		ICU Level of Service G	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Volume (vph)	0	0	0	755	1465	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	3539	3433	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	422			611	490	
Travel Time (s)	9.6			13.9	11.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	0	839	1628	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	839	1628	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 152.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations						
Volume (vph)	0	0	1465	905	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.97	1.00	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	0	0	3433	1863	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	0	0	3433	1863	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	223			540	780	
Travel Time (s)	5.1			12.3	17.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	1628	1006	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1628	1006	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			24	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 152.7%		ICU Level of Service H	
Analysis Period (min) 15			

Intersection Sign configuration not allowed in HCM analysis.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	235	170	775	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.937			
Flt Protected					0.950	
Satd. Flow (prot)	0	0	3316	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	3316	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	547		441			294
Travel Time (s)	12.4		10.0			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	261	189	861	361
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	450	0	861	361
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.6%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	235	170	775	325
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	261	189	861	361
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			441			636
pX, platoon unblocked	0.86	0.99			0.99	
vC, conflicting volume	2439	225			450	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2568	207			433	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			23	
cM capacity (veh/h)	4	794			1115	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	174	276	861	361
Volume Left	0	0	861	0
Volume Right	0	189	0	0
cSH	1700	1700	1115	1700
Volume to Capacity	0.10	0.16	0.77	0.21
Queue Length 95th (ft)	0	0	202	0
Control Delay (s)	0.0	0.0	18.2	0.0
Lane LOS			C	
Approach Delay (s)	0.0		12.8	
Approach LOS				

Intersection Summary			
Average Delay	9.4		
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	145	30	15	195	50	30	435	25	60	320	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.980			0.974			0.992			0.989	
Flt Protected		0.993			0.997			0.997			0.993	
Satd. Flow (prot)	0	1813	0	0	1809	0	0	5029	0	0	3476	0
Flt Permitted		0.896			0.981			0.898			0.856	
Satd. Flow (perm)	0	1636	0	0	1780	0	0	4530	0	0	2996	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			16			10			16	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		111			158			910			482	
Travel Time (s)		2.5			3.6			20.7			11.0	
Peak Hour Factor	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)	33	161	33	17	217	56	33	483	28	67	356	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	0	0	290	0	0	544	0	0	456	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			Perm			pm+pt		
Protected Phases		4			8			2		1	1 6	
Permitted Phases	4			8			2			1 6		
Detector Phase	4	4		8	8		2	2		1	1 6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		10.0		
Total Split (s)	33.0	33.0	0.0	33.0	33.0	0.0	29.0	29.0	0.0	22.0	73.0	0.0
Total Split (%)	39.3%	39.3%	0.0%	39.3%	39.3%	0.0%	34.5%	34.5%	0.0%	26.2%	86.9%	0.0%
Maximum Green (s)	29.0	29.0		29.0	29.0		25.0	25.0		16.0		
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		5.5		
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5		

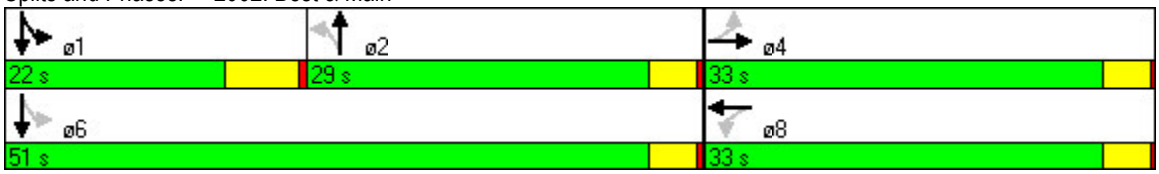
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	51.0
Total Split (%)	61%
Maximum Green (s)	47.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-3.0	-3.0	-1.0
Total Lost Time (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
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		
Recall Mode	Min	Min		Min	Min		Max	Max		Max		
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0				
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0				
Pedestrian Calls (#/hr)	0	0		0	0		0	0				
Act Effct Green (s)		17.2			17.2			26.1			48.2	
Actuated g/C Ratio		0.24			0.24			0.37			0.68	
v/c Ratio		0.56			0.66			0.33			0.21	
Control Delay		28.1			30.5			17.4			5.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		28.1			30.5			17.4			5.1	
LOS		C			C			B			A	
Approach Delay		28.1			30.5			17.4			5.1	
Approach LOS		C			C			B			A	

Intersection Summary

Area Type: Other
Cycle Length: 84
Actuated Cycle Length: 71.4
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 17.8 — Intersection LOS: B
Intersection Capacity Utilization 51.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2002: Best & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	227	290	544	456
v/c Ratio	0.56	0.66	0.33	0.21
Control Delay	28.1	30.5	17.4	5.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.1	30.5	17.4	5.1
Queue Length 50th (ft)	83	109	60	31
Queue Length 95th (ft)	147	182	100	65
Internal Link Dist (ft)	31	78	830	402
Turn Bay Length (ft)				
Base Capacity (vph)	697	760	1663	2156
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.33	0.38	0.33	0.21

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	115	45	25	150	40	150	435	20	25	375	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.95	0.95	0.95
Frt		0.974			0.975			0.995			0.979	
Flt Protected		0.985			0.994			0.988			0.997	
Satd. Flow (prot)	0	1787	0	0	1805	0	0	4999	0	0	3454	0
Flt Permitted		0.788			0.953			0.741			0.904	
Satd. Flow (perm)	0	1430	0	0	1731	0	0	3749	0	0	3132	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			17			11			28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		250			335			338			910	
Travel Time (s)		5.7			7.6			7.7			20.7	
Peak Hour Factor	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)	78	128	50	28	167	44	167	483	22	28	417	72
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	256	0	0	239	0	0	672	0	0	517	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	29.0	29.0	0.0	29.0	29.0	0.0	14.0	60.0	0.0	32.0	32.0	0.0
Total Split (%)	38.7%	38.7%	0.0%	38.7%	38.7%	0.0%	18.7%	80.0%	0.0%	42.7%	42.7%	0.0%
Maximum Green (s)	25.0	25.0		25.0	25.0		10.0			28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

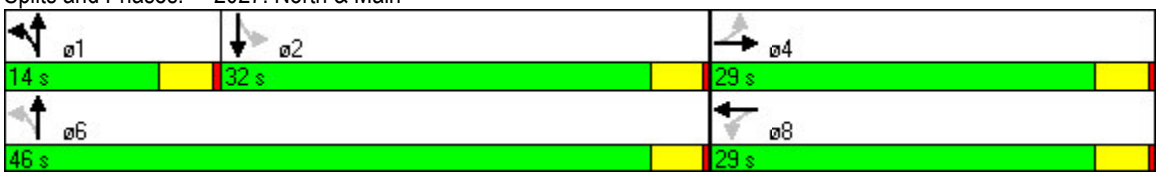
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	46.0
Total Split (%)	61%
Maximum Green (s)	42.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		None			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		16.1			16.1			42.2			29.3	
Actuated g/C Ratio		0.25			0.25			0.66			0.45	
v/c Ratio		0.69			0.53			0.25			0.36	
Control Delay		30.4			23.8			5.2			12.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		30.4			23.8			5.2			12.8	
LOS		C			C			A			B	
Approach Delay		30.4			23.8			5.2			12.8	
Approach LOS		C			C			A			B	

Intersection Summary

Area Type: Other
Cycle Length: 75
Actuated Cycle Length: 64.4
Natural Cycle: 50
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 14.0 — Intersection LOS: B
Intersection Capacity Utilization 61.1% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2027: North & Main



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	256	239	672	517
v/c Ratio	0.69	0.53	0.25	0.36
Control Delay	30.4	23.8	5.2	12.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.4	23.8	5.2	12.8
Queue Length 50th (ft)	85	76	31	63
Queue Length 95th (ft)	156	136	63	119
Internal Link Dist (ft)	170	255	258	830
Turn Bay Length (ft)				
Base Capacity (vph)	593	715	2744	1438
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.33	0.24	0.36

Intersection Summary

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	45	55	600	15	20	630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.91	0.91	0.95	0.95
Frt	0.926		0.996			
Flt Protected	0.978					0.998
Satd. Flow (prot)	1687	0	5016	0	0	3498
Flt Permitted	0.978					0.927
Satd. Flow (perm)	1687	0	5016	0	0	3249
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	61		9			
Link Speed (mph)	30		30			30
Link Distance (ft)	394		482			736
Travel Time (s)	9.0		11.0			16.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	3%	3%	3%	3%
Adj. Flow (vph)	50	61	667	17	22	700
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	0	684	0	0	722
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1		2		1	2
Detector Template	Left		Thru		Left	Thru
Leading Detector (ft)	20		100		20	100
Trailing Detector (ft)	0		0		0	0
Detector 1 Position(ft)	0		0		0	0
Detector 1 Size(ft)	20		6		20	6
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0		0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Minimum Split (s)	20.0		20.0		20.0	20.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Maximum Green (s)	21.0		51.0		51.0	51.0
Yellow Time (s)	3.5		3.5		3.5	3.5
All-Red Time (s)	0.5		0.5		0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		Max		Max	Max
Walk Time (s)	5.0		5.0		5.0	5.0
Flash Dont Walk (s)	11.0		11.0		11.0	11.0
Pedestrian Calls (#/hr)	0		0		0	0
Act Effct Green (s)	8.1		62.1			62.1
Actuated g/C Ratio	0.11		0.82			0.82
v/c Ratio	0.47		0.17			0.27
Control Delay	22.6		2.1			2.5
Queue Delay	0.0		0.0			0.0
Total Delay	22.6		2.1			2.5
LOS	C		A			A
Approach Delay	22.6		2.1			2.5
Approach LOS	C		A			A

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 75.3
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 3.8 — Intersection LOS: A
Intersection Capacity Utilization 44.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2101: Dodge & Main

Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	111	684	722
v/c Ratio	0.47	0.17	0.27
Control Delay	22.6	2.1	2.5
Queue Delay	0.0	0.0	0.0
Total Delay	22.6	2.1	2.5
Queue Length 50th (ft)	23	19	33
Queue Length 95th (ft)	63	36	64
Internal Link Dist (ft)	314	402	656
Turn Bay Length (ft)			
Base Capacity (vph)	515	4139	2680
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.22	0.17	0.27

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	110	30	15	65	20	55	730	40	5	255	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.973			0.994			0.992	
Flt Protected		0.998			0.992			0.997			0.999	
Satd. Flow (prot)	0	1807	0	0	1798	0	0	1846	0	0	1846	0
Flt Permitted		0.992			0.953			0.962			0.987	
Satd. Flow (perm)	0	1796	0	0	1727	0	0	1781	0	0	1824	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			21			8			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			293	
Travel Time (s)		7.4			17.0			9.7			6.7	
Peak Hour Factor	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)	6	122	33	17	72	22	61	811	44	6	283	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	0	111	0	0	916	0	0	306	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.31			0.22			0.83			0.27	
Control Delay		16.4			15.1			18.0			5.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.4			15.1			18.0			5.9	
LOS		B			B			B			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		16.4			15.1			18.0			5.9	
Approach LOS		B			B			B			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 15.2	Intersection LOS: B
Intersection Capacity Utilization 80.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Carlton & Ellicott

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	161	111	916	306
v/c Ratio	0.31	0.22	0.83	0.27
Control Delay	16.4	15.1	18.0	5.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.4	15.1	18.0	5.9
Queue Length 50th (ft)	39	24	220	42
Queue Length 95th (ft)	81	58	#484	74
Internal Link Dist (ft)	245	667	345	213
Turn Bay Length (ft)				
Base Capacity (vph)	525	504	1101	1128
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.22	0.83	0.27

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	115	10	20	230	25	60	655	115	0	240	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.988			0.981				
Flt Protected		0.995			0.996			0.996				
Satd. Flow (prot)	0	1835	0	0	1833	0	0	1820	0	0	1863	0
Flt Permitted		0.959			0.975			0.961				
Satd. Flow (perm)	0	1769	0	0	1794	0	0	1756	0	0	1863	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			9			25				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			1103			365			184	
Travel Time (s)		3.8			25.1			8.3			4.2	
Peak Hour Factor	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)	17	128	11	22	256	28	67	728	128	0	267	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	156	0	0	306	0	0	923	0	0	267	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	38.0	38.0	0.0	38.0	38.0	0.0
Total Split (%)	34.5%	34.5%	0.0%	34.5%	34.5%	0.0%	65.5%	65.5%	0.0%	65.5%	65.5%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			35.0			35.0	
Actuated g/C Ratio		0.29			0.29			0.60			0.60	
v/c Ratio		0.30			0.58			0.86			0.24	
Control Delay		17.1			22.0			20.5			6.0	
Queue Delay		0.0			0.0			0.0			2.5	
Total Delay		17.1			22.0			20.5			8.5	
LOS		B			C			C			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		17.1			22.0			20.5			8.5	
Approach LOS		B			C			C			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 85.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: High & Ellicott

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	156	306	923	267
v/c Ratio	0.30	0.58	0.86	0.24
Control Delay	17.1	22.0	20.5	6.0
Queue Delay	0.0	0.0	0.0	2.5
Total Delay	17.1	22.0	20.5	8.5
Queue Length 50th (ft)	39	87	222	37
Queue Length 95th (ft)	81	156	#487	66
Internal Link Dist (ft)	89	1023	285	104
Turn Bay Length (ft)				
Base Capacity (vph)	523	532	1070	1124
Starvation Cap Reductn	0	0	0	725
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.30	0.58	0.86	0.67

Intersection Summary

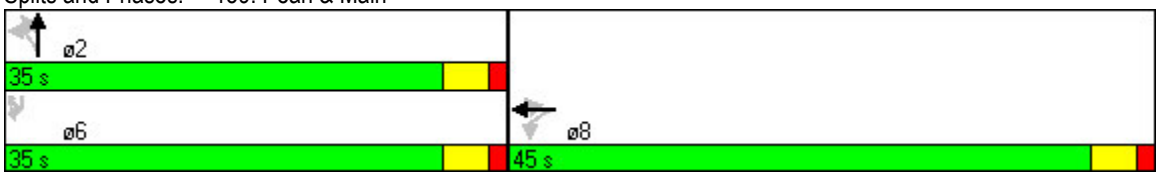
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	660	640	210	75	20	290	340	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	0.850
Flt Protected		0.974				0.986		
Satd. Flow (prot)	0	4951	1538	0	0	1736	2760	1509
Flt Permitted		0.974				0.986		
Satd. Flow (perm)	0	4951	1538	0	0	1736	2760	1509
Right Turn on Red								Yes
Satd. Flow (RTOR)								106
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	815	736	228	106	32	354	378	106
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	1551	228	0	0	492	378	106
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	custom
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	6
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	25.0
Total Split (s)	45.0	45.0	45.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	56.3%	56.3%	56.3%	43.8%	43.8%	43.8%	43.8%	43.8%
Maximum Green (s)	40.4	40.4	40.4	30.4	30.4	30.4	30.4	30.4
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	4.1
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
Act Effct Green (s)		40.4	40.4			30.9	30.9	30.9
Actuated g/C Ratio		0.50	0.50			0.39	0.39	0.39
v/c Ratio		0.92dl	0.29			0.73	0.35	0.16
Control Delay		13.6	12.4			32.7	18.7	4.3
Queue Delay		0.3	0.5			0.0	0.0	0.0
Total Delay		13.8	12.9			32.7	18.7	4.3

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		B	B			C	B	A
Approach Delay		13.7				32.7		
Approach LOS		B				C		

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 45 (56%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 17.4	Intersection LOS: B
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 159: Pearl & Main



Lane Group	WBT	WBR	NBT	SBR	SBR2
Lane Group Flow (vph)	1551	228	492	378	106
v/c Ratio	0.92dl	0.29	0.73	0.35	0.16
Control Delay	13.6	12.4	32.7	18.7	4.3
Queue Delay	0.3	0.5	0.0	0.0	0.0
Total Delay	13.8	12.9	32.7	18.7	4.3
Queue Length 50th (ft)	134	50	221	74	0
Queue Length 95th (ft)	175	93	291	112	12
Internal Link Dist (ft)	206		625		
Turn Bay Length (ft)					
Base Capacity (vph)	2500	777	671	1066	648
Starvation Cap Reductn	332	251	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.72	0.43	0.73	0.35	0.16

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	90	40	35	140	25	45	375	25	5	850	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.960			0.983			0.992			0.995	
Flt Protected		0.998			0.991			0.995				
Satd. Flow (prot)	0	1785	0	0	1815	0	0	1839	0	0	1853	0
Flt Permitted		0.988			0.933			0.865			0.998	
Satd. Flow (perm)	0	1767	0	0	1708	0	0	1598	0	0	1850	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			12			9			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			747			425			295	
Travel Time (s)		7.4			17.0			9.7			6.7	
Peak Hour Factor	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)	6	100	44	39	156	28	50	417	28	6	944	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	223	0	0	495	0	0	989	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	40.0	40.0	0.0	40.0	40.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	66.7%	66.7%	0.0%	66.7%	66.7%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		36.0	36.0		36.0	36.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		17.0			17.0			37.0			37.0	
Actuated g/C Ratio		0.28			0.28			0.62			0.62	
v/c Ratio		0.29			0.45			0.50			0.87	
Control Delay		14.7			20.2			8.4			20.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.7			20.2			8.4			20.1	
LOS		B			C			A			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		14.7			20.2			8.4			20.1	
Approach LOS		B			C			A			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 60	
Control Type: Pretimed	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: Carlton & Ellicott

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	150	223	495	989
v/c Ratio	0.29	0.45	0.50	0.87
Control Delay	14.7	20.2	8.4	20.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.7	20.2	8.4	20.1
Queue Length 50th (ft)	32	62	83	249
Queue Length 95th (ft)	71	118	145	#531
Internal Link Dist (ft)	245	667	345	215
Turn Bay Length (ft)				
Base Capacity (vph)	526	493	989	1143
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.45	0.50	0.87

Intersection Summary

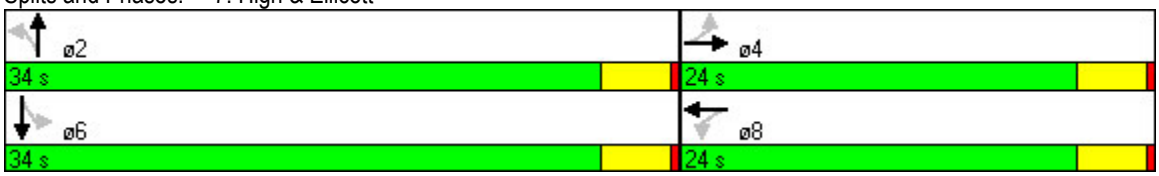
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	225	30	25	135	35	40	350	70	0	830	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.985			0.976			0.979				
Flt Protected		0.996			0.994			0.996				
Satd. Flow (prot)	0	1827	0	0	1807	0	0	1816	0	0	3539	0
Flt Permitted		0.973			0.940			0.887				
Satd. Flow (perm)	0	1785	0	0	1709	0	0	1618	0	0	3539	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			21			24				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		169			1103			363			184	
Travel Time (s)		3.8			25.1			8.3			4.2	
Peak Hour Factor	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)	22	250	33	28	150	39	44	389	78	0	922	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	305	0	0	217	0	0	511	0	0	922	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	24.0	24.0	0.0	24.0	24.0	0.0	34.0	34.0	0.0	34.0	34.0	0.0
Total Split (%)	41.4%	41.4%	0.0%	41.4%	41.4%	0.0%	58.6%	58.6%	0.0%	58.6%	58.6%	0.0%
Maximum Green (s)	20.0	20.0		20.0	20.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		21.0			21.0			31.0			31.0	
Actuated g/C Ratio		0.36			0.36			0.53			0.53	
v/c Ratio		0.47			0.34			0.58			0.49	
Control Delay		16.5			14.0			12.0			9.6	
Queue Delay		0.0			0.0			0.0			22.7	
Total Delay		16.5			14.0			12.0			32.3	
LOS		B			B			B			C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		16.5			14.0			12.0			32.3	
Approach LOS		B			B			B			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 58	
Actuated Cycle Length: 58	
Offset: 35 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 40	
Control Type: Pretimed	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 22.5	Intersection LOS: C
Intersection Capacity Utilization 75.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: High & Ellicott



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	305	217	511	922
v/c Ratio	0.47	0.34	0.58	0.49
Control Delay	16.5	14.0	12.0	9.6
Queue Delay	0.0	0.0	0.0	22.7
Total Delay	16.5	14.0	12.0	32.3
Queue Length 50th (ft)	76	48	103	95
Queue Length 95th (ft)	137	94	183	136
Internal Link Dist (ft)	89	1023	283	104
Turn Bay Length (ft)				
Base Capacity (vph)	654	632	876	1892
Starvation Cap Reductn	0	0	0	992
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.47	0.34	0.58	1.02

Intersection Summary

Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (vph)	500	275	345	645	0	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.952				0.865	
Flt Protected			0.950			
Satd. Flow (prot)	1773	0	1770	1863	1611	0
Flt Permitted			0.950			
Satd. Flow (perm)	1773	0	1770	1863	1611	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	791			148	443	
Travel Time (s)	18.0			3.4	10.1	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	556	306	383	717	0	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	862	0	383	717	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 75.5%		ICU Level of Service D	
Analysis Period (min) 15			

Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Volume (veh/h)	500	275	345	645	0	45
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)	556	306	383	717	0	50
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	791			573		
pX, platoon unblocked					0.71	
vC, conflicting volume			861		2192	708
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			861		2473	708
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			51		100	88
cM capacity (veh/h)			781		12	435

Direction, Lane #	NB 1	SB 1	SB 2	NW 1
Volume Total	861	383	717	50
Volume Left	0	383	0	0
Volume Right	306	0	0	50
cSH	1700	781	1700	435
Volume to Capacity	0.51	0.49	0.42	0.12
Queue Length 95th (ft)	0	69	0	10
Control Delay (s)	0.0	14.0	0.0	14.4
Lane LOS		B		B
Approach Delay (s)	0.0	4.9		14.4
Approach LOS				B

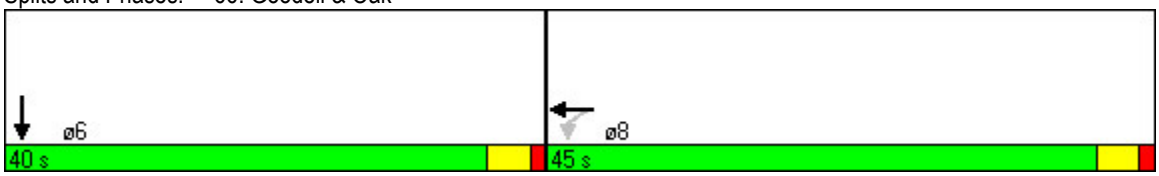
Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	185	1030	25	0	0	0	0	610	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997						0.999	
Flt Protected					0.993							
Satd. Flow (prot)	0	0	0	0	6344	0	0	0	0	0	1861	0
Flt Permitted					0.993							
Satd. Flow (perm)	0	0	0	0	6344	0	0	0	0	0	1861	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					79						1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	206	1144	28	0	0	0	0	678	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1378	0	0	0	0	0	684	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.4	
Total Split (s)	0.0	0.0	0.0	45.0	45.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	52.9%	52.9%	0.0%	0.0%	0.0%	0.0%	0.0%	47.1%	0.0%
Maximum Green (s)				40.5	40.5						35.6	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.2	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.4	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					41.5						36.6	
Actuated g/C Ratio					0.49						0.43	
v/c Ratio					0.44						0.85	
Control Delay					13.8						32.8	
Queue Delay					0.0						0.0	
Total Delay					13.8						32.8	
LOS					B						C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					13.8						32.8	
Approach LOS					B						C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 57.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 66: Goodell & Oak



Lane Group	WBT	SBT
Lane Group Flow (vph)	1378	684
v/c Ratio	0.44	0.85
Control Delay	13.8	32.8
Queue Delay	0.0	0.0
Total Delay	13.8	32.8
Queue Length 50th (ft)	124	330
Queue Length 95th (ft)	152	#532
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3138	802
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.44	0.85

Intersection Summary

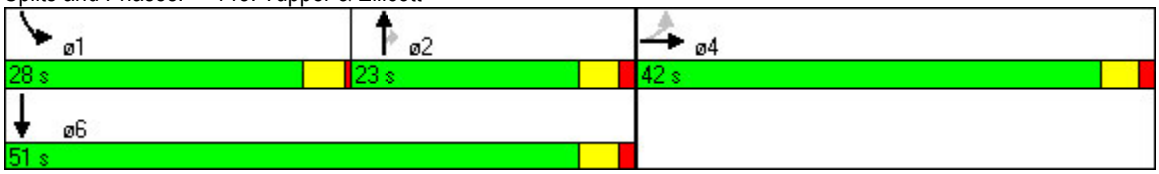
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	1240	10	0	0	0	0	160	195	495	185	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.97	1.00	1.00
Ped Bike Factor		1.00										
Frt		0.998						0.960	0.850			
Flt Protected		0.999								0.950		
Satd. Flow (prot)	0	5155	0	0	0	0	0	1687	1504	3502	1267	0
Flt Permitted		0.999								0.950		
Satd. Flow (perm)	0	5155	0	0	0	0	0	1687	1504	3502	1267	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						18	19			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	30	1476	20	0	0	0	0	182	291	717	370	0
Shared Lane Traffic (%)									23%			
Lane Group Flow (vph)	0	1526	0	0	0	0	0	249	224	717	370	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases	4								2			
Minimum Split (s)	40.0	40.0						25.0	25.0	8.0	25.0	
Total Split (s)	42.0	42.0	0.0	0.0	0.0	0.0	0.0	23.0	23.0	28.0	51.0	0.0
Total Split (%)	45.2%	45.2%	0.0%	0.0%	0.0%	0.0%	0.0%	24.7%	24.7%	30.1%	54.8%	0.0%
Maximum Green (s)	37.4	37.4						18.4	18.4	24.0	46.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.5	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	0.5	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.0	2.6	3.0
Lead/Lag								Lag	Lag	Lead		
Lead-Lag Optimize?								Yes	Yes	Yes		
Walk Time (s)	5.0	5.0						5.0	5.0		5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0		11.0	
Pedestrian Calls (#/hr)	0	0						0	0		0	
Act Effct Green (s)		39.4						20.4	20.4	26.0	48.4	
Actuated g/C Ratio		0.42						0.22	0.22	0.28	0.52	
v/c Ratio		0.70						0.65	0.65	0.73	0.56	
Control Delay		24.0						39.5	40.1	35.6	19.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		19.3						0.0	0.0	0.0	0.0	
Total Delay		43.4						39.5	40.1	35.6	19.2	
LOS		D						D	D	D	B	
Approach Delay		43.4						39.8			30.0	
Approach LOS		D						D			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 93	
Actuated Cycle Length: 93	
Offset: 38 (41%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 38.1	Intersection LOS: D
Intersection Capacity Utilization 61.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 145: Tupper & Ellicott



Lane Group	EBT	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1526	249	224	717	370
v/c Ratio	0.70	0.65	0.65	0.73	0.56
Control Delay	24.0	39.5	40.1	35.6	19.2
Queue Delay	19.3	0.0	0.0	0.0	0.0
Total Delay	43.4	39.5	40.1	35.6	19.2
Queue Length 50th (ft)	262	131	116	196	140
Queue Length 95th (ft)	285	212	135	185	98
Internal Link Dist (ft)	262	271			652
Turn Bay Length (ft)					
Base Capacity (vph)	2185	384	345	979	659
Starvation Cap Reductn	697	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.03	0.65	0.65	0.73	0.56

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	115	690	100	40	225	0	0	565	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.983						0.976	
Flt Protected					0.994		0.950					
Satd. Flow (prot)	0	0	0	0	6261	0	1770	1863	0	0	3454	0
Flt Permitted					0.994		0.168					
Satd. Flow (perm)	0	0	0	0	6261	0	313	1863	0	0	3454	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					51						28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	128	767	111	44	250	0	0	628	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1006	0	44	250	0	0	750	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	45.0	45.0	0.0	10.0	50.0	0.0	0.0	30.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	52.9%	52.9%	0.0%	11.8%	58.8%	0.0%	0.0%	35.3%	0.0%
Maximum Green (s)				41.0	41.0		6.0				26.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

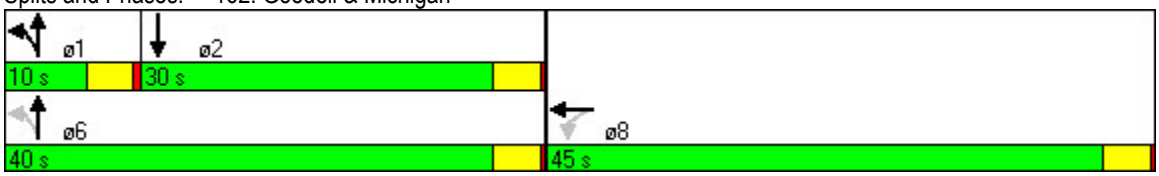
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	40.0
Total Split (%)	47%
Maximum Green (s)	36.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					42.0		37.0	37.0			27.0	
Actuated g/C Ratio					0.49		0.44	0.44			0.32	
v/c Ratio					0.32		0.17	0.31			0.67	
Control Delay					12.6		15.6	17.0			27.7	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					12.6		15.6	17.0			27.7	
LOS					B		B	B			C	
Approach Delay					12.6			16.8			27.7	
Approach LOS					B			B			C	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 18.7 — Intersection LOS: B
Intersection Capacity Utilization 45.9% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 162: Goodell & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	1006	44	250	750
v/c Ratio	0.32	0.17	0.31	0.67
Control Delay	12.6	15.6	17.0	27.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	12.6	15.6	17.0	27.7
Queue Length 50th (ft)	84	13	84	174
Queue Length 95th (ft)	106	32	138	237
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	3119	256	811	1116
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.17	0.31	0.67

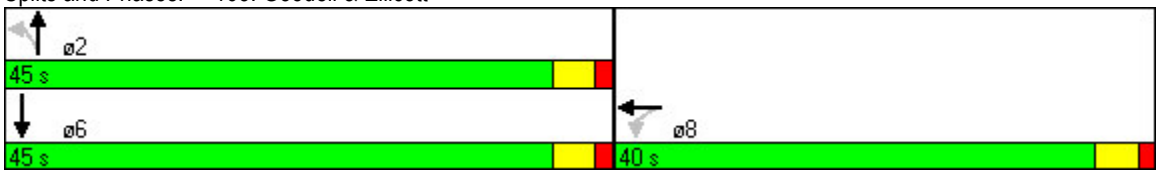
Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	15	705	325	90	120	0	0	605	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					0.99							
Frt					0.953						0.992	
Flt Protected					0.999			0.978				
Satd. Flow (prot)	0	0	0	0	6128	0	0	1825	0	0	1848	0
Flt Permitted					0.999			0.349				
Satd. Flow (perm)	0	0	0	0	6128	0	0	651	0	0	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					173						5	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		326			375			732			791	
Travel Time (s)		7.4			8.5			16.6			18.0	
Confl. Peds. (#/hr)						3						
Peak Hour Factor	0.90	0.90	0.90	0.50	0.85	0.83	0.78	0.88	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	0%	1%	0%	4%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	0	0	30	829	392	115	136	0	0	672	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1251	0	0	251	0	0	716	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					
Protected Phases					8			2			6	
Permitted Phases				8			2					
Minimum Split (s)				40.0	40.0		25.0	25.0			20.6	
Total Split (s)	0.0	0.0	0.0	40.0	40.0	0.0	45.0	45.0	0.0	0.0	45.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	47.1%	47.1%	0.0%	52.9%	52.9%	0.0%	0.0%	52.9%	0.0%
Maximum Green (s)				35.4	35.4		40.4	40.4			40.4	
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	3.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)					37.4			42.4			41.4	
Actuated g/C Ratio					0.44			0.50			0.49	
v/c Ratio					0.45			0.77			0.79	
Control Delay					6.3			36.5			26.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay					0.0			0.0			0.0	
Total Delay					6.3			36.5			26.2	
LOS					A			D			C	
Approach Delay					6.3			36.5			26.2	
Approach LOS					A			D			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 43 (51%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 71.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 163: Goodell & Ellicott



Lane Group	WBT	NBT	SBT
Lane Group Flow (vph)	1251	251	716
v/c Ratio	0.45	0.77	0.79
Control Delay	6.3	36.5	26.2
Queue Delay	0.0	0.0	0.0
Total Delay	6.3	36.5	26.2
Queue Length 50th (ft)	29	104	303
Queue Length 95th (ft)	33	#234	457
Internal Link Dist (ft)	295	652	711
Turn Bay Length (ft)			
Base Capacity (vph)	2793	325	903
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.45	0.77	0.79

Intersection Summary

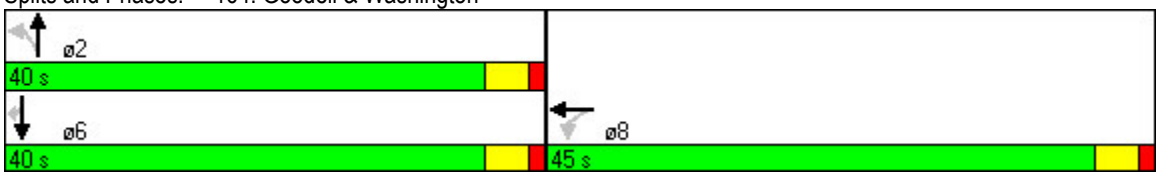
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	30	515	10	95	285	0	0	240	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997							0.850
Flt Protected					0.997			0.986				
Satd. Flow (prot)	0	0	0	0	6363	0	0	1787	0	0	1792	1429
Flt Permitted					0.997			0.778				
Satd. Flow (perm)	0	0	0	0	6363	0	0	1410	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5							26
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	33	579	11	127	317	0	0	276	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	623	0	0	444	0	0	276	26
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	45.0	45.0	0.0	40.0	40.0	0.0	0.0	40.0	40.0
Total Split (%)	0.0%	0.0%	0.0%	52.9%	52.9%	0.0%	47.1%	47.1%	0.0%	0.0%	47.1%	47.1%
Maximum Green (s)				40.4	40.4		35.4	35.4			35.4	35.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					42.4			37.4			37.4	37.4
Actuated g/C Ratio					0.50			0.44			0.44	0.44
v/c Ratio					0.20			0.72			0.35	0.04
Control Delay					5.3			20.1			17.4	5.7
Queue Delay					0.0			0.0			0.0	0.0
Total Delay					5.3			20.1			17.4	5.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			C			B	A
Approach Delay					5.3			20.1			16.4	
Approach LOS					A			C			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 164: Goodell & Washington



Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	623	444	276	26
v/c Ratio	0.20	0.72	0.35	0.04
Control Delay	5.3	20.1	17.4	5.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.3	20.1	17.4	5.7
Queue Length 50th (ft)	20	197	94	0
Queue Length 95th (ft)	m25	315	146	6
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3177	620	788	643
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.72	0.35	0.04

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	15	25	0	0	0	210	930	10	5	370	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.926						0.999			0.995	
Flt Protected		0.994						0.991			0.999	
Satd. Flow (prot)	0	1715	0	0	0	0	0	1844	0	0	1852	0
Flt Permitted		0.994						0.832			0.984	
Satd. Flow (perm)	0	1715	0	0	0	0	0	1548	0	0	1824	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28						1			6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		363			376			922			675	
Travel Time (s)		8.3			8.5			21.0			15.3	
Peak Hour Factor	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)	6	17	28	0	0	0	233	1033	11	6	411	17
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	0	0	0	1277	0	0	434	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm						Perm			Perm		
Protected Phases		4						2			6	
Permitted Phases	4						2			6		
Minimum Split (s)	20.0	20.0					20.0	20.0		20.0	20.0	
Total Split (s)	20.0	20.0	0.0	0.0	0.0	0.0	100.0	100.0	0.0	100.0	100.0	0.0
Total Split (%)	16.7%	16.7%	0.0%	0.0%	0.0%	0.0%	83.3%	83.3%	0.0%	83.3%	83.3%	0.0%
Maximum Green (s)	16.0	16.0					96.0	96.0		96.0	96.0	
Yellow Time (s)	3.5	3.5					3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5					0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0					5.0	5.0		5.0	5.0	
Flash Dont Walk (s)	11.0	11.0					11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		17.0						97.0			97.0	
Actuated g/C Ratio		0.14						0.81			0.81	
v/c Ratio		0.19						1.02			0.29	
Control Delay		27.0						44.1			3.4	
Queue Delay		0.0						8.9			0.0	
Total Delay		27.0						52.9			3.4	
LOS		C						D			A	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		27.0						52.9			3.4	
Approach LOS		C						D			A	

Intersection Summary	
Area Type:	Other
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 40.0	Intersection LOS: D
Intersection Capacity Utilization 95.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 12: Virginia & Michigan

Lane Group	EBT	NBT	SBT
Lane Group Flow (vph)	51	1277	434
v/c Ratio	0.19	1.02	0.29
Control Delay	27.0	44.1	3.4
Queue Delay	0.0	8.9	0.0
Total Delay	27.0	52.9	3.4
Queue Length 50th (ft)	16	~1050	66
Queue Length 95th (ft)	54	#1316	94
Internal Link Dist (ft)	283	842	595
Turn Bay Length (ft)			
Base Capacity (vph)	267	1251	1476
Starvation Cap Reductn	0	31	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.19	1.05	0.29

Intersection Summary

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

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	60	50	120	150	35	45	95	40	30	235	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.941			0.984				0.850		0.982	
Flt Protected		0.998			0.981			0.984			0.995	
Satd. Flow (prot)	0	1749	0	0	1798	0	0	1833	1583	0	1820	0
Flt Permitted		0.987			0.809			0.848			0.968	
Satd. Flow (perm)	0	1730	0	0	1483	0	0	1580	1583	0	1771	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			9				44		22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1080			414			330			643	
Travel Time (s)		24.5			9.4			7.5			14.6	
Peak Hour Factor	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)	6	67	56	133	167	39	50	106	44	33	261	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	0	0	339	0	0	156	44	0	338	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0	20.0	20.0	20.0	
Total Split (s)	22.0	22.0	0.0	22.0	22.0	0.0	49.0	49.0	49.0	49.0	49.0	0.0
Total Split (%)	31.0%	31.0%	0.0%	31.0%	31.0%	0.0%	69.0%	69.0%	69.0%	69.0%	69.0%	0.0%
Maximum Green (s)	18.0	18.0		18.0	18.0		45.0	45.0	45.0	45.0	45.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		18.3			18.3			46.5	46.5		46.5	
Actuated g/C Ratio		0.26			0.26			0.66	0.66		0.66	
v/c Ratio		0.27			0.87			0.15	0.04		0.29	
Control Delay		14.4			49.0			5.3	1.7		5.7	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		14.4			49.0			5.3	1.7		5.7	
LOS		B			D			A	A		A	
Approach Delay		14.4			49.0			4.5			5.7	
Approach LOS		B			D			A			A	

Intersection Summary

Area Type: Other
Cycle Length: 71
Actuated Cycle Length: 70.8
Natural Cycle: 40
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 21.2 — Intersection LOS: C
Intersection Capacity Utilization 53.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 21: North & Michigan

Lane Group	EBT	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	129	339	156	44	338
v/c Ratio	0.27	0.87	0.15	0.04	0.29
Control Delay	14.4	49.0	5.3	1.7	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.4	49.0	5.3	1.7	5.7
Queue Length 50th (ft)	25	136	23	0	51
Queue Length 95th (ft)	65	#277	43	9	86
Internal Link Dist (ft)	1000	334	250		563
Turn Bay Length (ft)					
Base Capacity (vph)	503	404	1038	1055	1171
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.84	0.15	0.04	0.29

Intersection Summary

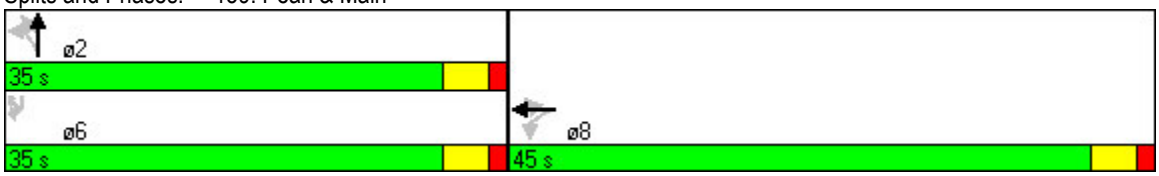
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
Lane Configurations								
Volume (vph)	660	640	210	75	20	290	340	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	1.00	0.88	1.00
Frt			0.850				0.850	0.850
Flt Protected		0.974				0.986		
Satd. Flow (prot)	0	4951	1538	0	0	1736	2760	1509
Flt Permitted		0.974				0.986		
Satd. Flow (perm)	0	4951	1538	0	0	1736	2760	1509
Right Turn on Red								Yes
Satd. Flow (RTOR)								106
Link Speed (mph)		30				30		
Link Distance (ft)		286				705		
Travel Time (s)		6.5				16.0		
Peak Hour Factor	0.81	0.87	0.92	0.71	0.63	0.82	0.90	0.66
Heavy Vehicles (%)	3%	1%	5%	0%	0%	11%	3%	7%
Adj. Flow (vph)	815	736	228	106	32	354	378	106
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	1551	228	0	0	492	378	106
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Left	Right	Right
Median Width(ft)		0				0		
Link Offset(ft)		0				0		
Crosswalk Width(ft)		16				16		
Two way Left Turn Lane								
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15	15		9	9
Turn Type	Perm		Perm	Perm	Perm		custom	custom
Protected Phases		8				2		
Permitted Phases	8		8	2	2		6	6
Minimum Split (s)	45.0	45.0	45.0	20.6	20.6	20.6	25.0	25.0
Total Split (s)	45.0	45.0	45.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	56.3%	56.3%	56.3%	43.8%	43.8%	43.8%	43.8%	43.8%
Maximum Green (s)	40.4	40.4	40.4	30.4	30.4	30.4	30.4	30.4
Yellow Time (s)	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Lost Time Adjust (s)	0.0	0.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5
Total Lost Time (s)	4.6	4.6	4.6	4.1	4.1	4.1	4.1	4.1
Lead/Lag								
Lead-Lag Optimize?								
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
Act Effct Green (s)		40.4	40.4			30.9	30.9	30.9
Actuated g/C Ratio		0.50	0.50			0.39	0.39	0.39
v/c Ratio		0.92dl	0.29			0.73	0.35	0.16
Control Delay		12.2	11.1			32.7	18.7	4.3
Queue Delay		0.3	0.5			0.0	0.0	0.0
Total Delay		12.5	11.6			32.7	18.7	4.3

Lane Group	WBL	WBT	WBR	NBL2	NBL	NBT	SBR	SBR2
LOS		B	B			C	B	A
Approach Delay		12.4				32.7		
Approach LOS		B				C		

Intersection Summary	
Area Type:	Other
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 45 (56%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Pretimed	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 16.5	Intersection LOS: B
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 159: Pearl & Main



Lane Group	WBT	WBR	NBT	SBR	SBR2
Lane Group Flow (vph)	1551	228	492	378	106
v/c Ratio	0.92dl	0.29	0.73	0.35	0.16
Control Delay	12.2	11.1	32.7	18.7	4.3
Queue Delay	0.3	0.5	0.0	0.0	0.0
Total Delay	12.5	11.6	32.7	18.7	4.3
Queue Length 50th (ft)	120	45	221	74	0
Queue Length 95th (ft)	158	84	291	112	12
Internal Link Dist (ft)	206		625		
Turn Bay Length (ft)					
Base Capacity (vph)	2500	777	671	1066	648
Starvation Cap Reductn	332	251	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.72	0.43	0.73	0.35	0.16

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	40	60	15	30	5	55	365	10	5	885	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.929			0.986			0.997			0.999	
Flt Protected		0.993			0.985			0.994				
Satd. Flow (prot)	0	1718	0	0	1809	0	0	1846	0	0	1861	0
Flt Permitted		0.954			0.919			0.861			0.998	
Satd. Flow (perm)	0	1651	0	0	1688	0	0	1599	0	0	1857	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		67			6			4			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		377			388			675			662	
Travel Time (s)		8.6			8.8			15.3			15.0	
Peak Hour Factor	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)	17	44	67	17	33	6	61	406	11	6	983	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	128	0	0	56	0	0	478	0	0	1000	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm			Perm			pm+pt			Perm		
Protected Phases		4			8		1	1 6			2	
Permitted Phases	4			8			1 6			2		
Detector Phase	4	4		8	8		1	1 6		2	2	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0			4.0	4.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		8.0			20.0	20.0	
Total Split (s)	20.0	20.0	0.0	20.0	20.0	0.0	8.0	48.0	0.0	32.0	32.0	0.0
Total Split (%)	33.3%	33.3%	0.0%	33.3%	33.3%	0.0%	13.3%	80.0%	0.0%	53.3%	53.3%	0.0%
Maximum Green (s)	16.0	16.0		16.0	16.0		4.0			28.0	28.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5			3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5			0.5	0.5	

Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	20.0
Total Split (s)	40.0
Total Split (%)	67%
Maximum Green (s)	36.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0			3.0	3.0	
Recall Mode	None	None		None	None		Max			Max	Max	
Walk Time (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0					11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0					0	0	
Act Effct Green (s)		8.6			8.6			37.4			29.4	
Actuated g/C Ratio		0.17			0.17			0.75			0.59	
v/c Ratio		0.37			0.19			0.39			0.91	
Control Delay		13.9			18.3			4.1			27.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.9			18.3			4.1			27.5	
LOS		B			B			A			C	
Approach Delay		13.9			18.3			4.1			27.5	
Approach LOS		B			B			A			C	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 49.8
Natural Cycle: 75
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 19.4 — Intersection LOS: B
Intersection Capacity Utilization 74.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Carlton & Michigan

Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	5.0
Flash Dont Walk (s)	11.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	128	56	478	1000
v/c Ratio	0.37	0.19	0.39	0.91
Control Delay	13.9	18.3	4.1	27.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.9	18.3	4.1	27.5
Queue Length 50th (ft)	16	13	37	245
Queue Length 95th (ft)	53	38	92	#568
Internal Link Dist (ft)	297	308	595	582
Turn Bay Length (ft)				
Base Capacity (vph)	614	587	1228	1095
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.10	0.39	0.91

Intersection Summary

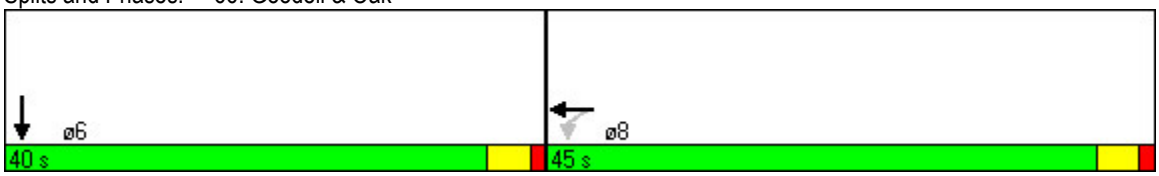
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	290	885	25	0	0	0	0	505	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997						0.999	
Flt Protected					0.988							
Satd. Flow (prot)	0	0	0	0	6312	0	0	0	0	0	1861	0
Flt Permitted					0.988							
Satd. Flow (perm)	0	0	0	0	6312	0	0	0	0	0	1861	0
Right Turn on Red			Yes	Yes		Yes			Yes			Yes
Satd. Flow (RTOR)					138						1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		375			339			685			585	
Travel Time (s)		8.5			7.7			15.6			13.3	
Peak Hour Factor	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)	0	0	0	322	983	28	0	0	0	0	561	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1333	0	0	0	0	0	567	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm								
Protected Phases					8						6	
Permitted Phases				8								
Minimum Split (s)				20.5	20.5						20.4	
Total Split (s)	0.0	0.0	0.0	45.0	45.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	52.9%	52.9%	0.0%	0.0%	0.0%	0.0%	0.0%	47.1%	0.0%
Maximum Green (s)				40.5	40.5						35.6	
Yellow Time (s)				3.2	3.2						3.2	
All-Red Time (s)				1.3	1.3						1.2	
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (s)	3.0	3.0	3.0	3.5	3.5	3.0	3.0	3.0	3.0	3.0	3.4	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					41.5						36.6	
Actuated g/C Ratio					0.49						0.43	
v/c Ratio					0.42						0.71	
Control Delay					12.9						25.4	
Queue Delay					0.0						0.0	
Total Delay					12.9						25.4	
LOS					B						C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay					12.9						25.4	
Approach LOS					B						C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 44 (52%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 45	
Control Type: Pretimed	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 51.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 66: Goodell & Oak



Lane Group	WBT	SBT
Lane Group Flow (vph)	1333	567
v/c Ratio	0.42	0.71
Control Delay	12.9	25.4
Queue Delay	0.0	0.0
Total Delay	12.9	25.4
Queue Length 50th (ft)	112	247
Queue Length 95th (ft)	140	m368
Internal Link Dist (ft)	259	505
Turn Bay Length (ft)		
Base Capacity (vph)	3152	802
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.42	0.71

Intersection Summary

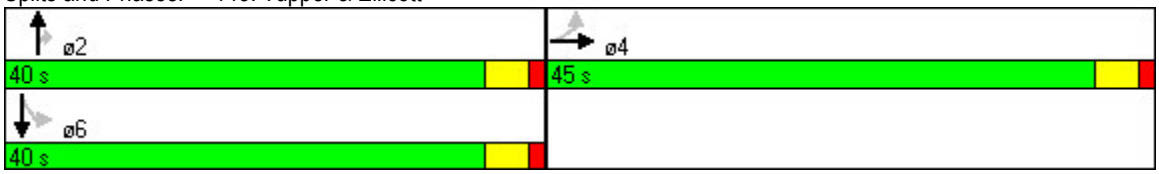
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	1240	10	0	0	0	0	160	195	175	185	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	0.91	0.91	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor		1.00										
Frt		0.998						0.960	0.850			
Flt Protected		0.999									0.980	
Satd. Flow (prot)	0	5156	0	0	0	0	0	1687	1504	0	2729	0
Flt Permitted		0.999									0.680	
Satd. Flow (perm)	0	5156	0	0	0	0	0	1687	1504	0	1893	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						19	19			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		342			351			351			732	
Travel Time (s)		7.8			8.0			8.0			16.6	
Confl. Peds. (#/hr)	1		1									
Peak Hour Factor	0.50	0.84	0.50	0.90	0.90	0.90	0.90	0.88	0.67	0.69	0.50	0.90
Heavy Vehicles (%)	1%	0%	20%	2%	2%	2%	2%	3%	2%	0%	50%	2%
Adj. Flow (vph)	30	1476	20	0	0	0	0	182	291	254	370	0
Shared Lane Traffic (%)									23%			
Lane Group Flow (vph)	0	1526	0	0	0	0	0	249	224	0	624	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm								Perm	Perm		
Protected Phases		4						2			6	
Permitted Phases	4								2	6		
Minimum Split (s)	40.0	40.0						25.0	25.0	25.0	25.0	
Total Split (s)	45.0	45.0	0.0	0.0	0.0	0.0	0.0	40.0	40.0	40.0	40.0	0.0
Total Split (%)	52.9%	52.9%	0.0%	0.0%	0.0%	0.0%	0.0%	47.1%	47.1%	47.1%	47.1%	0.0%
Maximum Green (s)	40.4	40.4						35.4	35.4	35.4	35.4	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	1.4	1.4						1.4	1.4	1.4	1.4	
Lost Time Adjust (s)	-2.0	-2.0	-1.0	-1.0	-1.0	-1.0	-1.0	-2.0	-2.0	-2.0	-2.0	-1.0
Total Lost Time (s)	2.6	2.6	3.0	3.0	3.0	3.0	3.0	2.6	2.6	2.6	2.6	3.0
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0						5.0	5.0	5.0	5.0	
Flash Dont Walk (s)	11.0	11.0						11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0						0	0	0	0	
Act Effct Green (s)		42.4						37.4	37.4		37.4	
Actuated g/C Ratio		0.50						0.44	0.44		0.44	
v/c Ratio		0.59						0.33	0.33		0.75	
Control Delay		10.6						15.9	15.9		32.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.4						0.0	0.0		0.0	
Total Delay		10.9						15.9	15.9		32.2	
LOS		B						B	B		C	
Approach Delay		10.9						15.9			32.2	
Approach LOS		B						B			C	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 38 (45%), Referenced to phase 4:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 57.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 145: Tupper & Ellicott



Lane Group	EBT	NBT	NBR	SBT
Lane Group Flow (vph)	1526	249	224	624
v/c Ratio	0.59	0.33	0.33	0.75
Control Delay	10.6	15.9	15.9	32.2
Queue Delay	0.4	0.0	0.0	0.0
Total Delay	10.9	15.9	15.9	32.2
Queue Length 50th (ft)	83	81	72	133
Queue Length 95th (ft)	103	134	86	98
Internal Link Dist (ft)	262	271		652
Turn Bay Length (ft)				
Base Capacity (vph)	2573	753	672	833
Starvation Cap Reductn	281	0	0	0
Spillback Cap Reductn	469	2	2	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.73	0.33	0.33	0.75

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	115	545	245	40	230	0	0	880	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	0.95	0.95
Frt					0.959						0.971	
Flt Protected					0.994		0.950					
Satd. Flow (prot)	0	0	0	0	6108	0	1770	1863	0	0	3437	0
Flt Permitted					0.994		0.111					
Satd. Flow (perm)	0	0	0	0	6108	0	207	1863	0	0	3437	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					143						41	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		382			388			342			922	
Travel Time (s)		8.7			8.8			7.8			21.0	
Peak Hour Factor	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)	0	0	0	128	606	272	44	256	0	0	978	239
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1006	0	44	256	0	0	1217	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors				1	1		1	1			1	
Detector Template												
Leading Detector (ft)				50	50		50	50			50	
Trailing Detector (ft)				0	0		0	0			0	
Detector 1 Position(ft)				0	0		0	0			0	
Detector 1 Size(ft)				50	50		50	50			50	
Detector 1 Type				Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)				0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)				0.0	0.0		0.0	0.0			0.0	
Turn Type				Perm			pm+pt					
Protected Phases					8		1	1 6			2	
Permitted Phases				8			1 6					
Detector Phase				8	8		1	1 6			2	
Switch Phase												
Minimum Initial (s)				4.0	4.0		4.0				4.0	
Minimum Split (s)				41.0	41.0		8.0				20.0	
Total Split (s)	0.0	0.0	0.0	41.0	41.0	0.0	8.0	52.0	0.0	0.0	36.0	0.0
Total Split (%)	0.0%	0.0%	0.0%	48.2%	48.2%	0.0%	9.4%	61.2%	0.0%	0.0%	42.4%	0.0%
Maximum Green (s)				37.0	37.0		4.0				32.0	
Yellow Time (s)				3.5	3.5		3.5				3.5	
All-Red Time (s)				0.5	0.5		0.5				0.5	

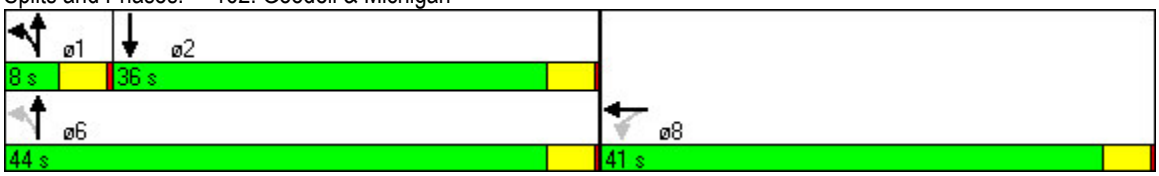
Lane Group	ø6
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Turn Type	
Protected Phases	6
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	8.0
Total Split (s)	44.0
Total Split (%)	52%
Maximum Green (s)	40.0
Yellow Time (s)	3.5
All-Red Time (s)	0.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
Total Lost Time (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
Lead/Lag							Lead				Lag	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)				3.0	3.0		3.0				3.0	
Recall Mode				Max	Max		None				Max	
Walk Time (s)				5.0	5.0						5.0	
Flash Dont Walk (s)				11.0	11.0						11.0	
Pedestrian Calls (#/hr)				0	0						0	
Act Effct Green (s)					38.0		41.0	41.0			33.0	
Actuated g/C Ratio					0.45		0.48	0.48			0.39	
v/c Ratio					0.36		0.23	0.28			0.90	
Control Delay					13.5		14.6	14.3			33.8	
Queue Delay					0.0		0.0	0.0			0.0	
Total Delay					13.5		14.6	14.3			33.8	
LOS					B		B	B			C	
Approach Delay					13.5			14.4			33.8	
Approach LOS					B			B			C	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 85
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 23.4 — Intersection LOS: C
Intersection Capacity Utilization 61.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 162: Goodell & Michigan



Lane Group	ø6
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	1006	44	256	1217
v/c Ratio	0.36	0.23	0.28	0.90
Control Delay	13.5	14.6	14.3	33.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	13.5	14.6	14.3	33.8
Queue Length 50th (ft)	83	12	79	304
Queue Length 95th (ft)	108	29	128	#438
Internal Link Dist (ft)	308		262	842
Turn Bay Length (ft)				
Base Capacity (vph)	2810	192	899	1359
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.36	0.23	0.28	0.90

Intersection Summary

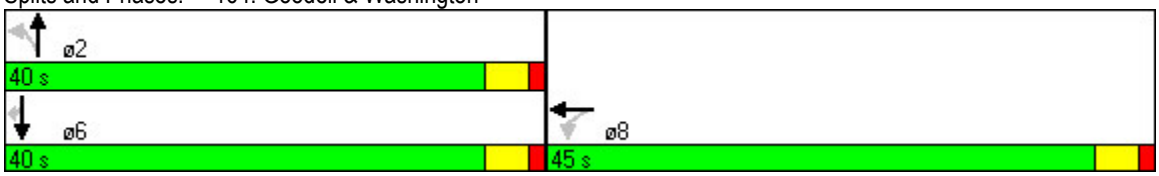
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	30	515	10	95	285	0	0	240	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.997							0.850
Flt Protected					0.997			0.986				
Satd. Flow (prot)	0	0	0	0	6363	0	0	1787	0	0	1792	1429
Flt Permitted					0.997			0.778				
Satd. Flow (perm)	0	0	0	0	6363	0	0	1410	0	0	1792	1429
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					5							26
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		286			326			718			1308	
Travel Time (s)		6.5			7.4			16.3			29.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.89	0.90	0.75	0.90	0.90	0.90	0.87	0.57
Heavy Vehicles (%)	2%	2%	2%	4%	2%	2%	12%	2%	2%	2%	6%	13%
Adj. Flow (vph)	0	0	0	33	579	11	127	317	0	0	276	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	623	0	0	444	0	0	276	26
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type				Perm			Perm					Perm
Protected Phases					8			2			6	
Permitted Phases				8			2					6
Minimum Split (s)				40.0	40.0		21.5	21.5			21.2	21.2
Total Split (s)	0.0	0.0	0.0	45.0	45.0	0.0	40.0	40.0	0.0	0.0	40.0	40.0
Total Split (%)	0.0%	0.0%	0.0%	52.9%	52.9%	0.0%	47.1%	47.1%	0.0%	0.0%	47.1%	47.1%
Maximum Green (s)				40.4	40.4		35.4	35.4			35.4	35.4
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				1.4	1.4		1.4	1.4			1.4	1.4
Lost Time Adjust (s)	-1.0	-1.0	-1.0	-2.0	-2.0	-1.0	-2.0	-2.0	-1.0	-1.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	2.6	2.6	3.0	2.6	2.6	3.0	3.0	2.6	2.6
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)				5.0	5.0		5.0	5.0			5.0	5.0
Flash Dont Walk (s)				11.0	11.0		11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)				0	0		0	0			0	0
Act Effct Green (s)					42.4			37.4			37.4	37.4
Actuated g/C Ratio					0.50			0.44			0.44	0.44
v/c Ratio					0.20			0.72			0.35	0.04
Control Delay					7.5			20.1			17.4	5.7
Queue Delay					0.0			0.0			0.0	0.0
Total Delay					7.5			20.1			17.4	5.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS					A			C			B	A
Approach Delay					7.5			20.1			16.4	
Approach LOS					A			C			B	

Intersection Summary	
Area Type:	Other
Cycle Length: 85	
Actuated Cycle Length: 85	
Offset: 50 (59%), Referenced to phase 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 13.6	Intersection LOS: B
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 164: Goodell & Washington



Lane Group	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	623	444	276	26
v/c Ratio	0.20	0.72	0.35	0.04
Control Delay	7.5	20.1	17.4	5.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.5	20.1	17.4	5.7
Queue Length 50th (ft)	30	197	94	0
Queue Length 95th (ft)	m36	315	146	6
Internal Link Dist (ft)	246	638	1228	
Turn Bay Length (ft)				
Base Capacity (vph)	3177	620	788	643
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.72	0.35	0.04

Intersection Summary

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

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	0	0	235	170	775	325
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt			0.937			
Flt Protected					0.950	
Satd. Flow (prot)	0	0	3316	0	1770	1863
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	3316	0	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	547		441			294
Travel Time (s)	12.4		10.0			6.7
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	0	261	189	861	361
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	450	0	861	361
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.6%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	0	0	235	170	775	325
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	0	261	189	861	361
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			441			636
pX, platoon unblocked	0.99	0.99			0.99	
vC, conflicting volume	2439	225			450	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2435	207			433	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			23	
cM capacity (veh/h)	6	794			1115	

Direction, Lane #	NB 1	NB 2	SB 1	SB 2
Volume Total	174	276	861	361
Volume Left	0	0	861	0
Volume Right	0	189	0	0
cSH	1700	1700	1115	1700
Volume to Capacity	0.10	0.16	0.77	0.21
Queue Length 95th (ft)	0	0	202	0
Control Delay (s)	0.0	0.0	18.2	0.0
Lane LOS			C	
Approach Delay (s)	0.0		12.8	
Approach LOS				

Intersection Summary			
Average Delay	9.4		
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	35	0	35	745	240	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1770	0	0	1859	1863	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1770	0	0	1859	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			181	316	
Travel Time (s)	14.9			4.1	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	0	39	828	267	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	867	267	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	35	0	35	745	240	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	0	39	828	267	0

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	39	867	267
Volume Left (vph)	39	39	0
Volume Right (vph)	0	0	0
Hadj (s)	0.23	0.04	0.03
Departure Headway (s)	6.4	4.4	4.9
Degree Utilization, x	0.07	1.06	0.36
Capacity (veh/h)	534	832	728
Control Delay (s)	9.9	67.5	10.6
Approach Delay (s)	9.9	67.5	10.6
Approach LOS	A	F	B

Intersection Summary			
Delay	52.6		
HCM Level of Service	F		
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	0	15	415	895	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1770	0	0	1859	1863	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1770	0	0	1859	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			182	316	
Travel Time (s)	14.9			4.1	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	0	17	461	994	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	478	994	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 57.1%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Volume (vph)	15	0	15	415	895	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	0	17	461	994	0

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	17	478	994
Volume Left (vph)	17	17	0
Volume Right (vph)	0	0	0
Hadj (s)	0.23	0.04	0.03
Departure Headway (s)	6.8	4.8	4.5
Degree Utilization, x	0.03	0.64	1.25
Capacity (veh/h)	500	745	807
Control Delay (s)	10.0	15.8	139.7
Approach Delay (s)	10.0	15.8	139.7
Approach LOS	B	C	F

Intersection Summary			
Delay	98.5		
HCM Level of Service	F		
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	35	0	35	745	240	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1770	0	0	1859	1863	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1770	0	0	1859	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			181	316	
Travel Time (s)	14.9			4.1	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	0	39	828	267	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	39	0	0	867	267	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 67.1%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	35	0	35	745	240	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	39	0	39	828	267	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)				365		
pX, platoon unblocked	0.66					
vC, conflicting volume	1172	267	267			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1002	267	267			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	77	100	97			
cM capacity (veh/h)	172	772	1297			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	39	867	267
Volume Left	39	39	0
Volume Right	0	0	0
cSH	172	1297	1700
Volume to Capacity	0.23	0.03	0.16
Queue Length 95th (ft)	21	2	0
Control Delay (s)	32.0	0.8	0.0
Lane LOS	D	A	
Approach Delay (s)	32.0	0.8	0.0
Approach LOS	D		

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	15	0	15	415	895	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1770	0	0	1859	1863	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1770	0	0	1859	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	655			182	316	
Travel Time (s)	14.9			4.1	7.2	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	17	0	17	461	994	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	478	994	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 57.1%	ICU Level of Service B
Analysis Period (min) 15	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	15	0	15	415	895	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	17	0	17	461	994	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)				366		
pX, platoon unblocked	0.96					
vC, conflicting volume	1489	994	994			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1488	994	994			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	87	100	98			
cM capacity (veh/h)	127	297	696			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	17	478	994
Volume Left	17	17	0
Volume Right	0	0	0
cSH	127	696	1700
Volume to Capacity	0.13	0.02	0.58
Queue Length 95th (ft)	11	2	0
Control Delay (s)	37.5	0.7	0.0
Lane LOS	E	A	
Approach Delay (s)	37.5	0.7	0.0
Approach LOS	E		

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

Appendix E

Background Traffic Growth Supporting Data

C&S COMPANIES

Subject Growth Rate Determination Based on NYSDOT traffic Data

Date 9/11/08 BNMC D0103001 KMF

① Segment of RTE (Main St) from Goodell to North St

2005 count = 9870
2002 count = 8070
1999 count = 8630

8630 — 1999
8070 — 2002
9870 — 2005

3 yrs | 3 yrs

$8070 = 8630 \times (1+x)^3$
$0.935 = (1+x)^3$
$0.978 = 1+x$
$-0.022 = x$
$-2.2\% = G.R.$

$9870 = 8070 \times (1+x)^3$
$1.22 = (1+x)^3$
$1.07 = 1+x$
$7\% = G.R.$

average: 2.4%

1

2 29.79 5 53023214 00.53 NORTH ST [illegible] 9870 05 8070 02 [illegible] 99 [illegible]

C&S COMPANIES

Subject

Date

RT 33:

② Segment from Gordell/Copper to Jefferson

2004 = 56,360
2001 = 57,720
1997 = 50,730

50,730 — 1997
57,720 — 2001
56,360 — 2004

4 yrs | 3 yrs

G.R.: 3% | G.R.: −1%

average: 1%

③ RT 384 (Delaware → just west of Main) from Chippewa to North

2004 = 14,710
2001 = 15,880
1997 = 14,380

14390 — 1997
15880 — 2001
14710 — 2004

4 yrs | 3 yrs

G.R.: 2.5% | G.R.: −2.5%

average: 0

2

1	00.87	33	53011011	00.87	ACC JEFFERSON AVE	58440	**	56360	04	57720	01	50730	87	0145

3

01.33	384	53011003	00.81	NORTH ST	14990	**	14710	04	15880	01	14380	97	050.
26		53011011											

C&S COMPANIES

Subject

Date

Latest data from each segment

Main : 7%
RT 33 : -1%
RT 324 : -2.5%

Average = 1.2%

* NYSDOT used 1% G.R. for Main St when estimating future volumes

↳ so we'll use 1%

Appendix F

Trip Generation Calculations

Table of Contents

Trip Generation, Volume Three

TRIP GENERATION RATES, PLOTS AND EQUATIONS

(Refer to the index in the User's Guide *for a complete list of land uses and independent variables.)*

Preface . . . . . *vii*

Institutional (Land Uses 500-599)

CODE	LAND USE	PAGE
501	Military Base	890
520	Elementary School	901
522	Middle School/Junior High School	911
530	High School	920
534	Private School (K–8)	945
536	Private School (K–12)	950
540	Junior/Community College	961
550	University/College	989
560	Church	1002
561	Synagogue	1016
565	Day Care Center	1025
566	Cemetery	1053
571	Prison	1061
590	Library	1070
591	Lodge/Fraternal Organization	1089

Medical (Land Uses 600-699)

CODE	LAND USE	PAGE
610	Hospital	1091
620	Nursing Home	1119
630	Clinic	1141

Office (Land Uses 700-799)

CODE	LAND USE	PAGE
710	General Office Building	1149
714	Corporate Headquarters Building	1165
715	Single Tenant Office Building	1173
720	Medical-Dental Office Building	1180

730 Government Office Building . . . 1199
731 State Motor Vehicles Department . . . 1202
732 United States Post Office . . . 1221
733 Government Office Complex . . . 1240
750 Office Park . . . 1248
760 Research and Development Center . . . 1270
770 Business Park . . . 1292

Retail (Land Uses 800-899)

CODE	LAND USE	PAGE
812	Building Materials and Lumber Store	1308
813	Free-Standing Discount Superstore	1327
814	Specialty Retail Center	1337
815	Free-Standing Discount Store	1347
816	Hardware/Paint Store	1366
817	Nursery (Garden Center)	1394
818	Nursery (Wholesale)	1422
820	Shopping Center	1448
823	Factory Outlet Center	1460
841	New Car Sales	1470
843	Automobile Parts Sales	1484
848	Tire Store	1490
849	Tire Superstore	1507
850	Supermarket	1522
851	Convenience Market (Open 24 Hours)	1533
852	Convenience Market (Open 15–16 Hours)	1543
853	Convenience Market with Gasoline Pumps	1548
854	Discount Supermarket	1566
860	Wholesale Market	1576
861	Discount Club	1579
862	Home Improvement Superstore	1598
863	Electronics Superstore	1607
864	Toy/Children's Superstore	1613
865	Baby Superstore	1616
866	Pet Supply Superstore	1618
867	Office Supply Superstore	1620
868	Book Superstore	1622
869	Discount Home Furnishing Superstore	1625
870	Apparel Store	1627
879	Arts and Crafts Store	1631

880 Pharmacy/Drugstore without Drive-Through Window 1634
881 Pharmacy/Drugstore with Drive-Through Window 1641
890 Furniture Store 1648
896 Video Rental Store 1667

Services (Land Uses 900-999)

CODE	LAND USE	PAGE
911	Walk-in Bank	1671
912	Drive-in Bank	1675
931	Quality Restaurant	1703
932	High-Turnover (Sit-Down) Restaurant	1722
933	Fast-Food Restaurant without Drive-Through Window	1741
934	Fast-Food Restaurant with Drive-Through Window	1749
935	Fast-Food Restaurant with Drive-Through Window and No Indoor Seating	1771
936	Drinking Place	1774
941	Quick Lubrication Vehicle Shop	1777
942	Automobile Care Center	1781
943	Automobile Parts and Service Center	1787
944	Gasoline/Service Station	1789
945	Gasoline/Service Station with Convenience Market	1797
946	Gasoline/Service Station with Convenience Market and Car Wash	1809
947	Self-Service Car Wash	1816
948	Automated Car Wash	1820

Land Use: 110
General Light Industrial

Description

Light industrial facilities usually employ fewer than 500 persons, they have an emphasis on activities other than manufacturing and typically have minimal office space. Typical light industrial activities include printing, material testing and assembly of data processing equipment. These are free-standing facilities devoted to a single use. General heavy industrial (Land Use 120), industrial park (Land Use 130) and manufacturing (Land Use 140) are related uses.

Additional Data

No vehicle occupancy data were available specifically for general light industrial, but the average was approximately 1.3 persons per automobile for all industrial uses.

The peak hour of the generator typically coincided with the peak hour of the adjacent street traffic.

Facilities with employees on shift work may peak at other hours.

The sites were surveyed in the early 1970s and the mid- to late 1980s throughout the United States.

Source Numbers

7, 9, 10, 11, 15, 17, 88, 174, 179, 184, 191, 192, 251, 253, 286, 300

General Light Industrial
(110)

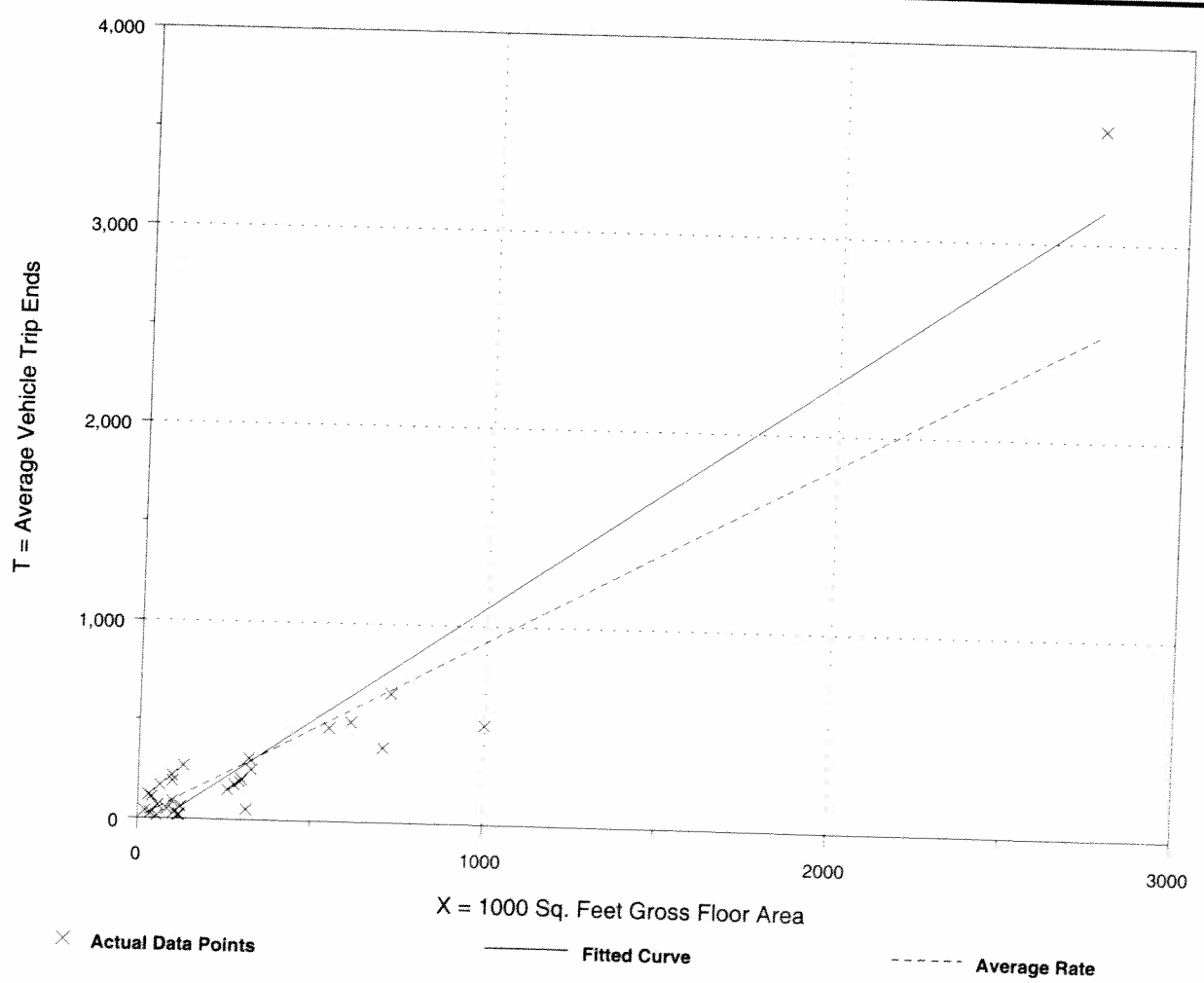
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 29
Average 1000 Sq. Feet GFA: 336
Directional Distribution: 88% entering, 12% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
0.92	0.17 - 4.00	1.07

Data Plot and Equation



Fitted Curve Equation: T = 1.18(X) - 89.28

R^2 = 0.92

General Light Industrial
(110)

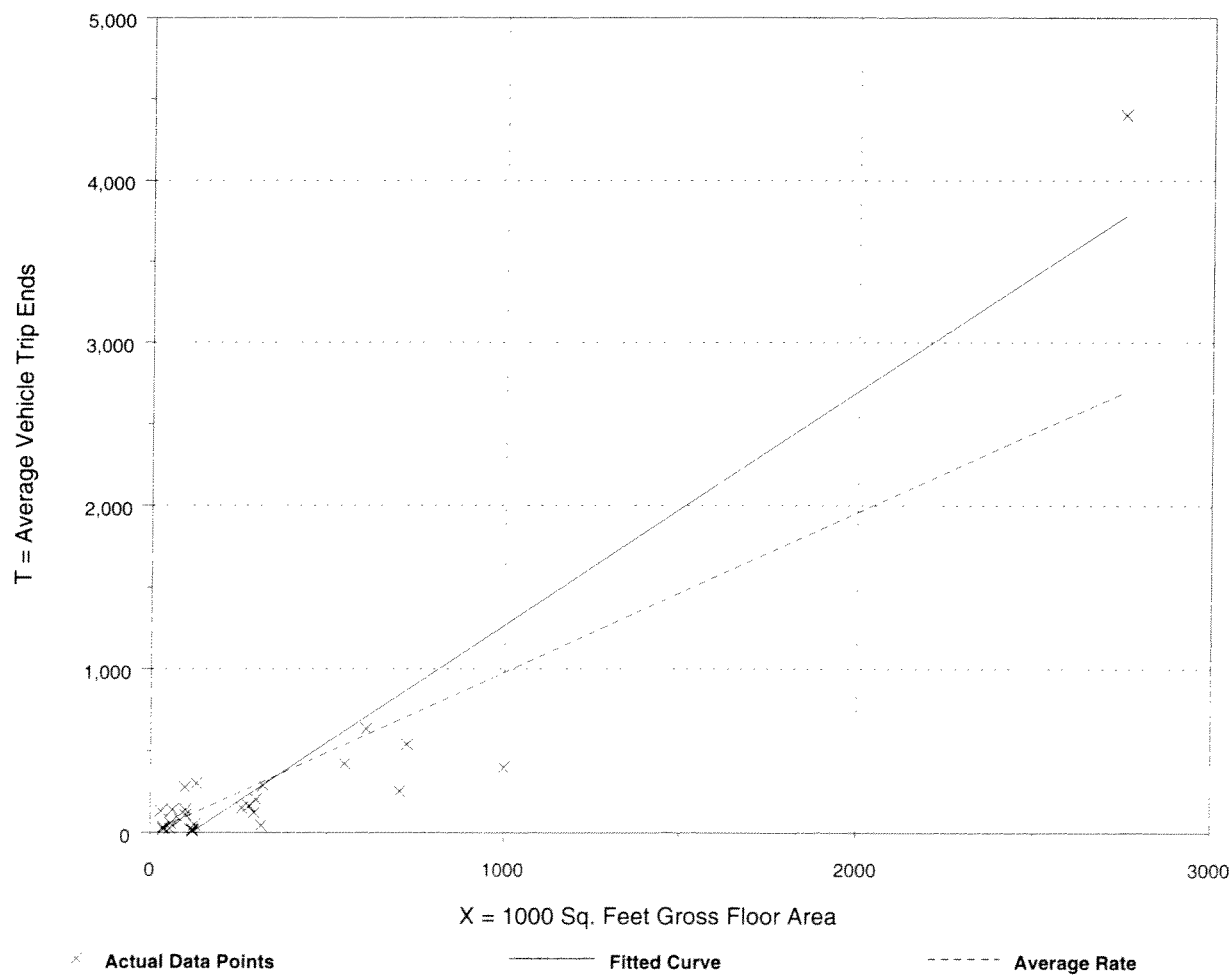
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 26
Average 1000 Sq. Feet GFA: 357
Directional Distribution: 12% entering, 88% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
0.98	0.08 - 4.50	1.16

Data Plot and Equation



Fitted Curve Equation: T = 1.43(X) - 163.42 **R^2 = 0.88**

Land Use: 610
Hospital

Description

A hospital is any institution where medical or surgical care and overnight accommodations are provided to non-ambulatory and ambulatory patients. However, the term "hospital" does not refer to medical clinics (facilities that provide diagnoses and outpatient care only) or nursing homes (facilities devoted to the care of persons unable to care for themselves), which are covered elsewhere in this report. Clinic (Land Use 630) is a related use.

Additional Data

Peak hours of the generator—

The weekday a.m. peak hour varied between 8:00 a.m. and 10:00 a.m. The weekday p.m. peak hour varied between 1:00 p.m. and 5:00 p.m.

The sites were surveyed from the 1960s to the 1990s throughout the United States.

Source Numbers

2, 6, 14, 28, 88, 98, 110, 112, 186, 241, 253, 262, 423, 429, 533, 573

Hospital
(610)

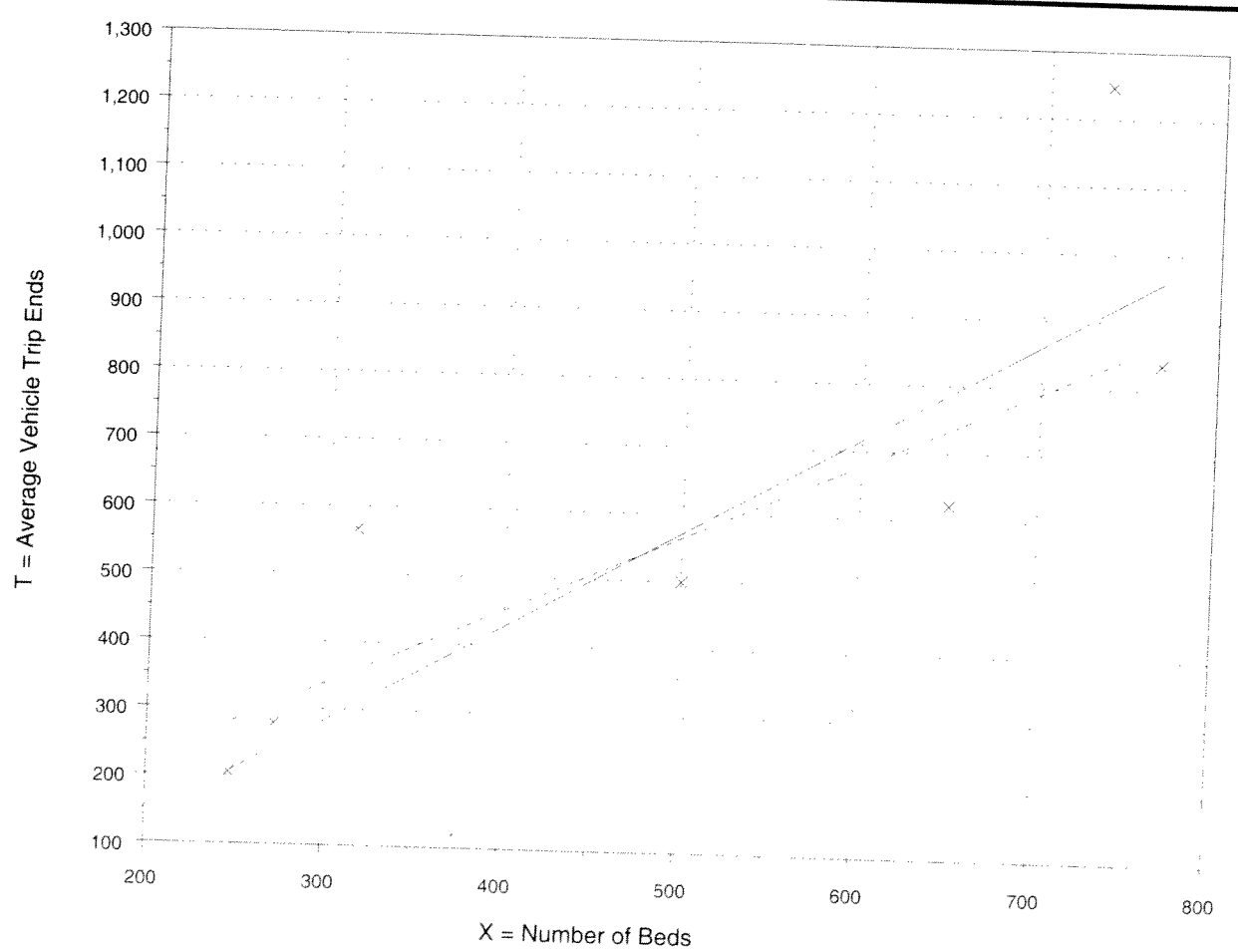
Average Vehicle Trip Ends vs: Beds
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 8
Average Number of Beds: 483
Directional Distribution: 70% entering, 30% exiting

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.13	0.32 - 1.79	1.14

Data Plot and Equation



Actual Data Points — Fitted Curve — Average Rate

Fitted Curve Equation: T = 1.44(X) - 149.79

R^2 = 0.68

Hospital
(610)

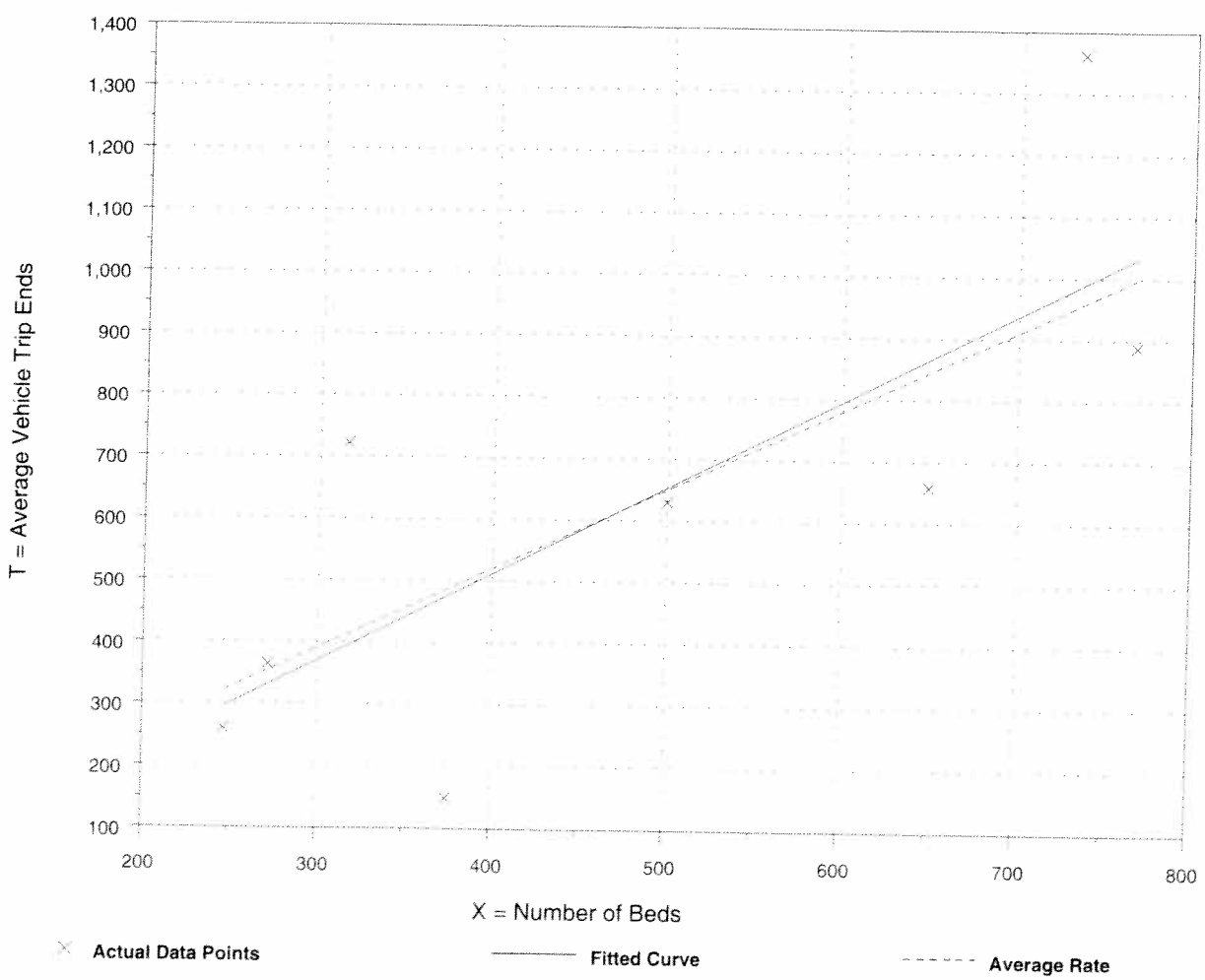
Average Vehicle Trip Ends vs: Beds
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 8
Average Number of Beds: 483
Directional Distribution: 36% entering, 64% exiting

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
1.30	0.40 - 2.28	1.24

Data Plot and Equation



Fitted Curve Equation: T = 1.42(X) - 54.39

R^2 = 0.60

Hospital
(610)

a01

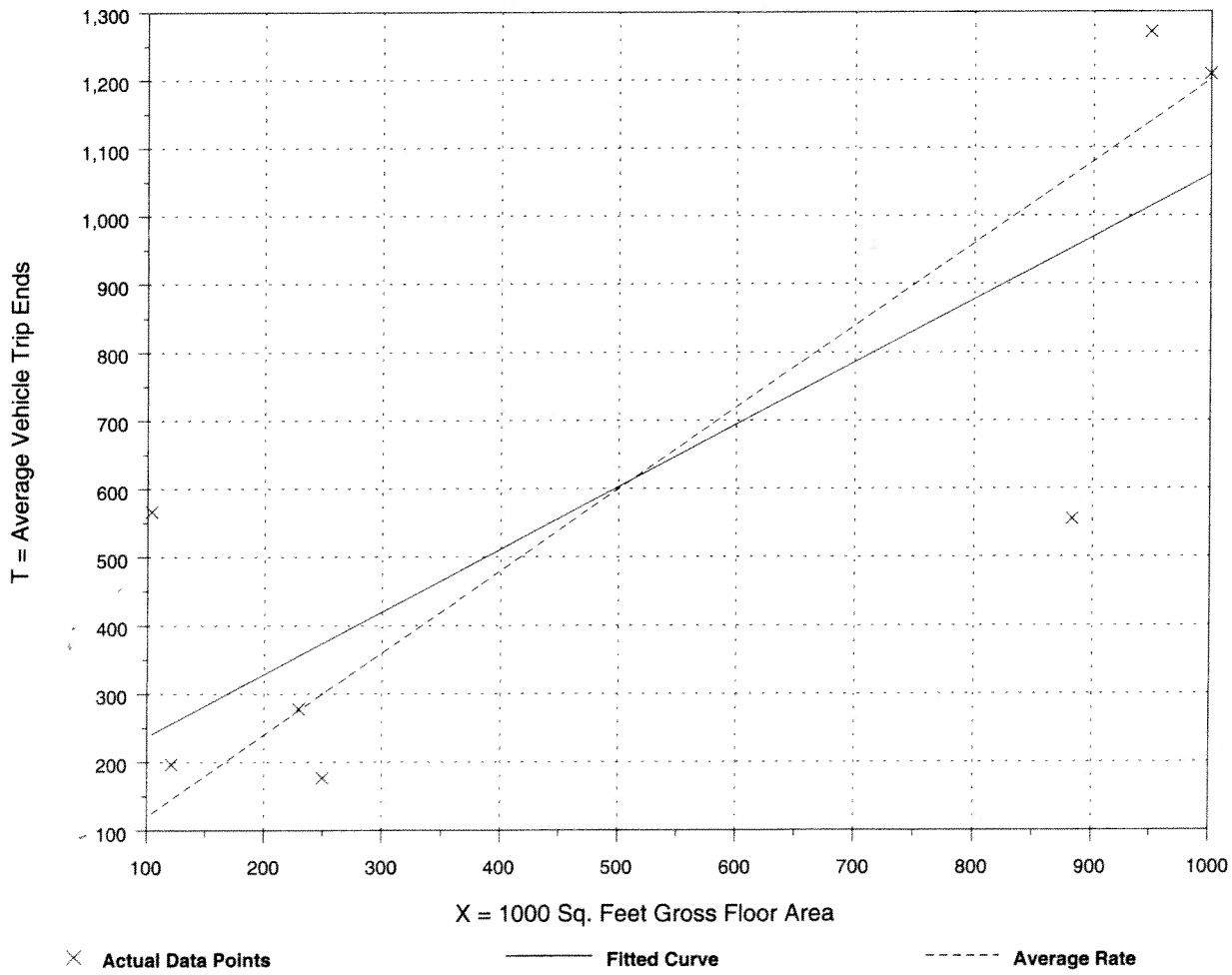
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 7
Average 1000 Sq. Feet GFA: 505
Directional Distribution: 67% entering, 33% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.20	0.63 - 5.45	1.36

Data Plot and Equation



Fitted Curve Equation: T = 0.91(X) + 145.24

R^2 = 0.68

Hospital
(610)

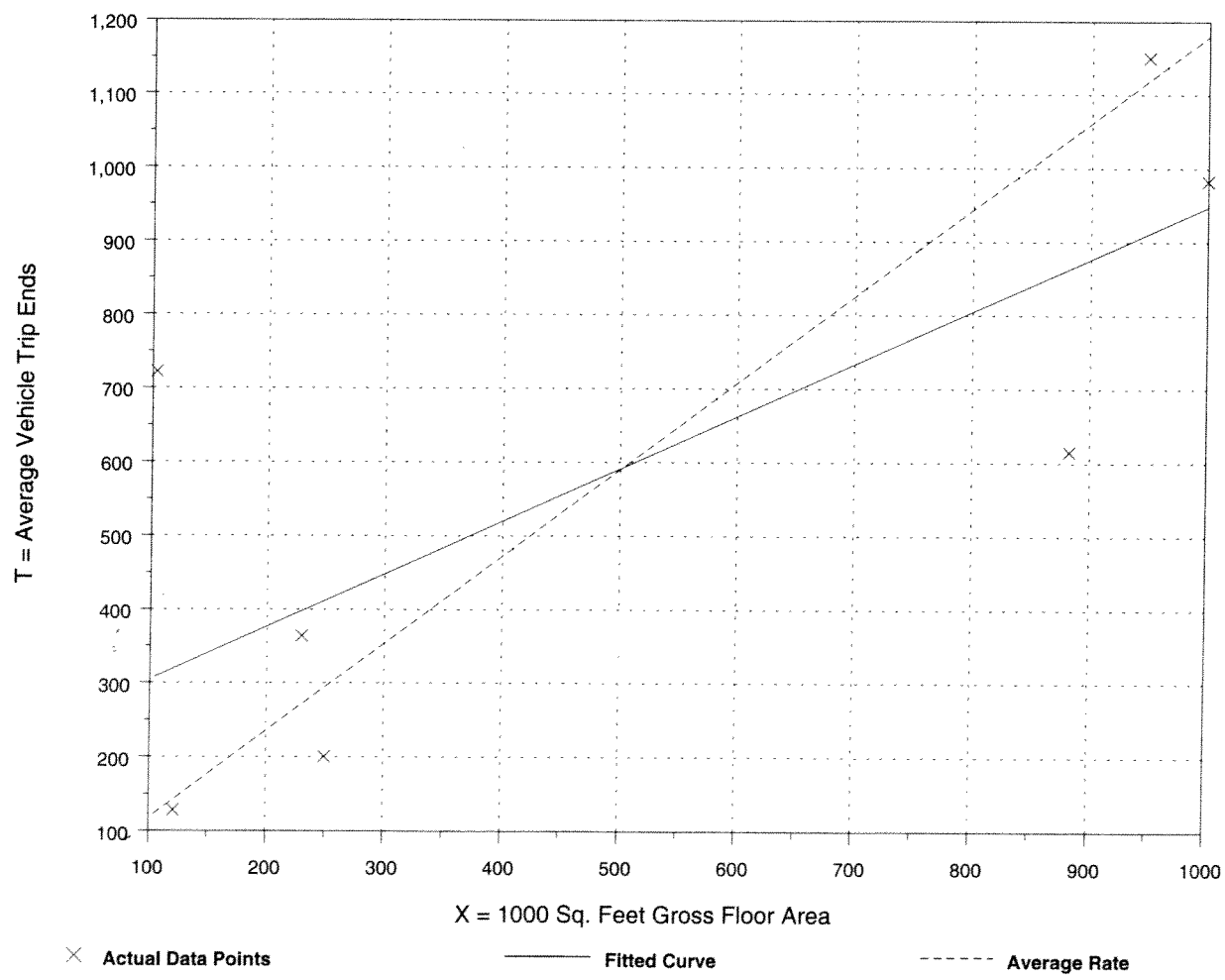
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 7
Average 1000 Sq. Feet GFA: 505
Directional Distribution: 33% entering, 67% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.18	0.70 - 6.94	1.50

Data Plot and Equation



Fitted Curve Equation: T = 0.71(X) + 233.89

R^2 = 0.58

Land Use: 620
Nursing Home

Description

A nursing home is a facility whose primary function is to care for persons who are unable to care for themselves. Examples of such facilities include rest homes and chronic care and convalescent homes. Skilled nurses and nursing aides are present 24 hours a day at these sites. Nursing homes are occupied by residents who do little or no driving; traffic is primarily generated by employees, visitors and deliveries. Assisted living (Land Use 254) and continuing care retirement community (Land Use 255) are related uses.

Additional Data

The sites were surveyed from the 1960s to the 1990s throughout the United States.

Source Numbers

91, 221, 237, 245, 253, 397, 436, 502

Nursing Home
(620)

SNF

Average Vehicle Trip Ends vs: Beds
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

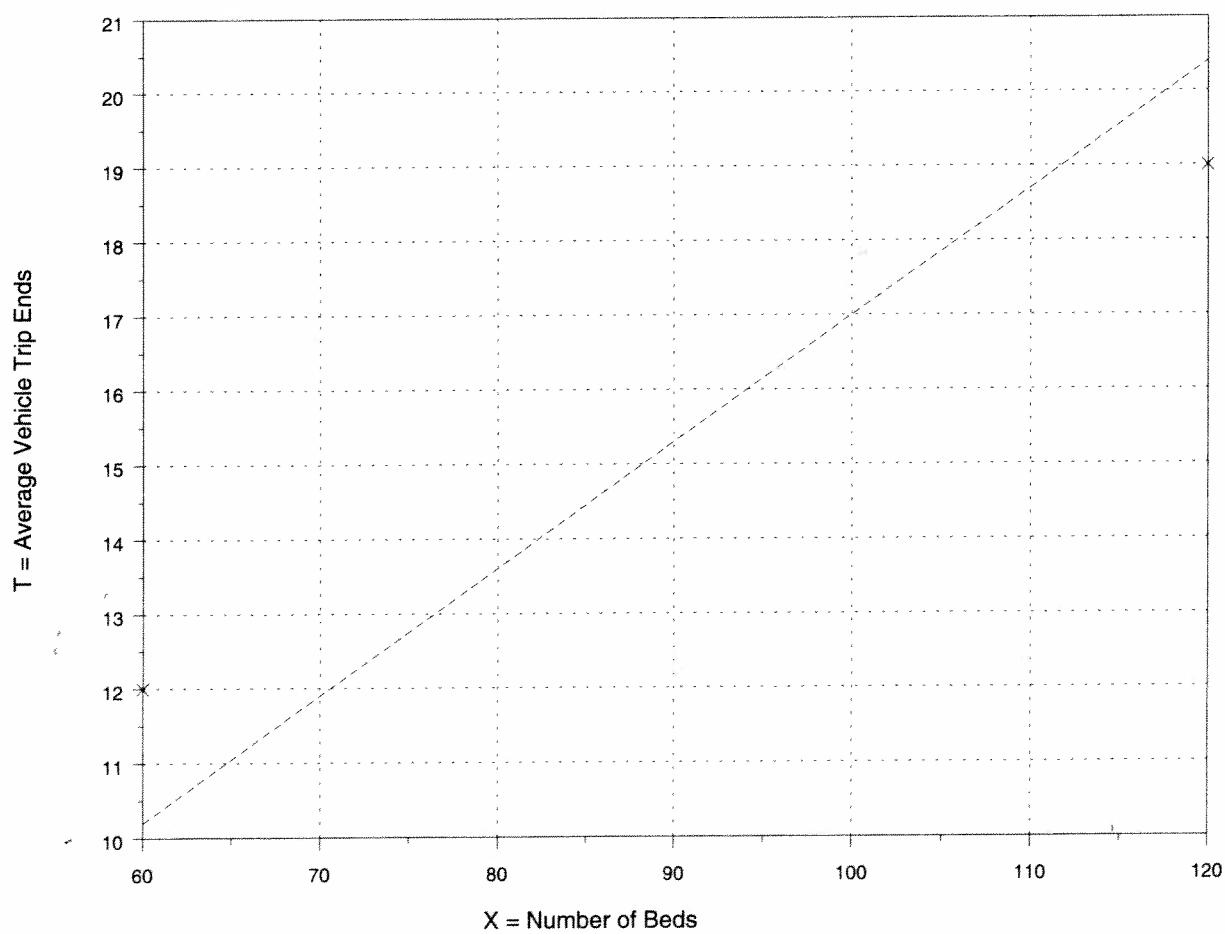
Number of Studies: 2
Average Number of Beds: 90
Directional Distribution: Not available

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.17	0.16 - 0.20	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



× **Actual Data Points**

------ **Average Rate**

Fitted Curve Equation: Not given

R^2 = ****

Nursing Home
(620)

SNF

Average Vehicle Trip Ends vs: Beds
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

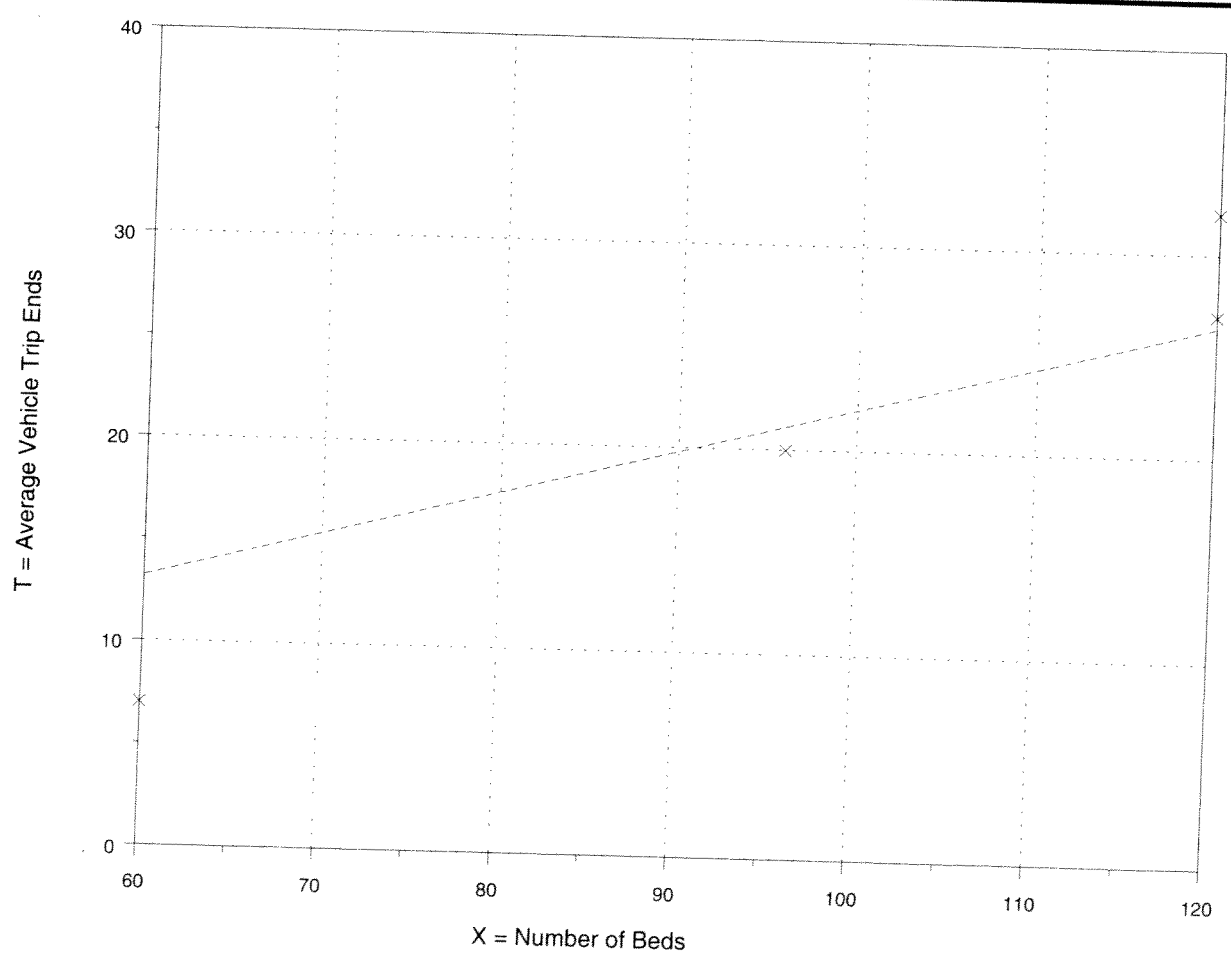
Number of Studies: 4
Average Number of Beds: 99
Directional Distribution: 33% entering, 67% exiting

Trip Generation per Bed

Average Rate	Range of Rates	Standard Deviation
0.22	0.12 - 0.27	0.47

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



× **Actual Data Points**

- - - - - **Average Rate**

Fitted Curve Equation: Not given

R^2 = ****

Nursing Home
(620)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

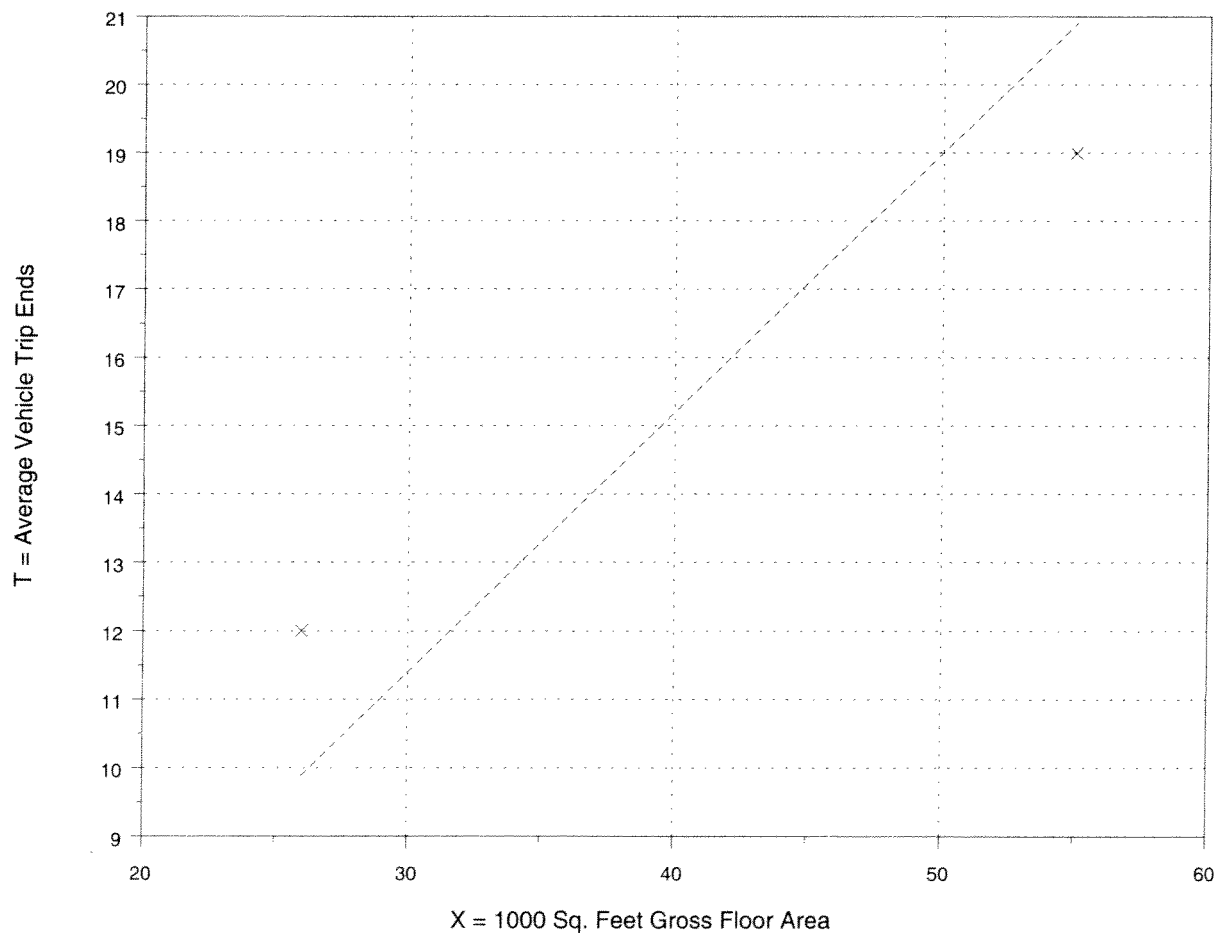
Number of Studies: 2
Average 1000 Sq. Feet GFA: 41
Directional Distribution: Not available

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
0.38	0.35 - 0.46	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



× **Actual Data Points** ------ **Average Rate**

Fitted Curve Equation: Not given R^2 = ****

Nursing Home
(620)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

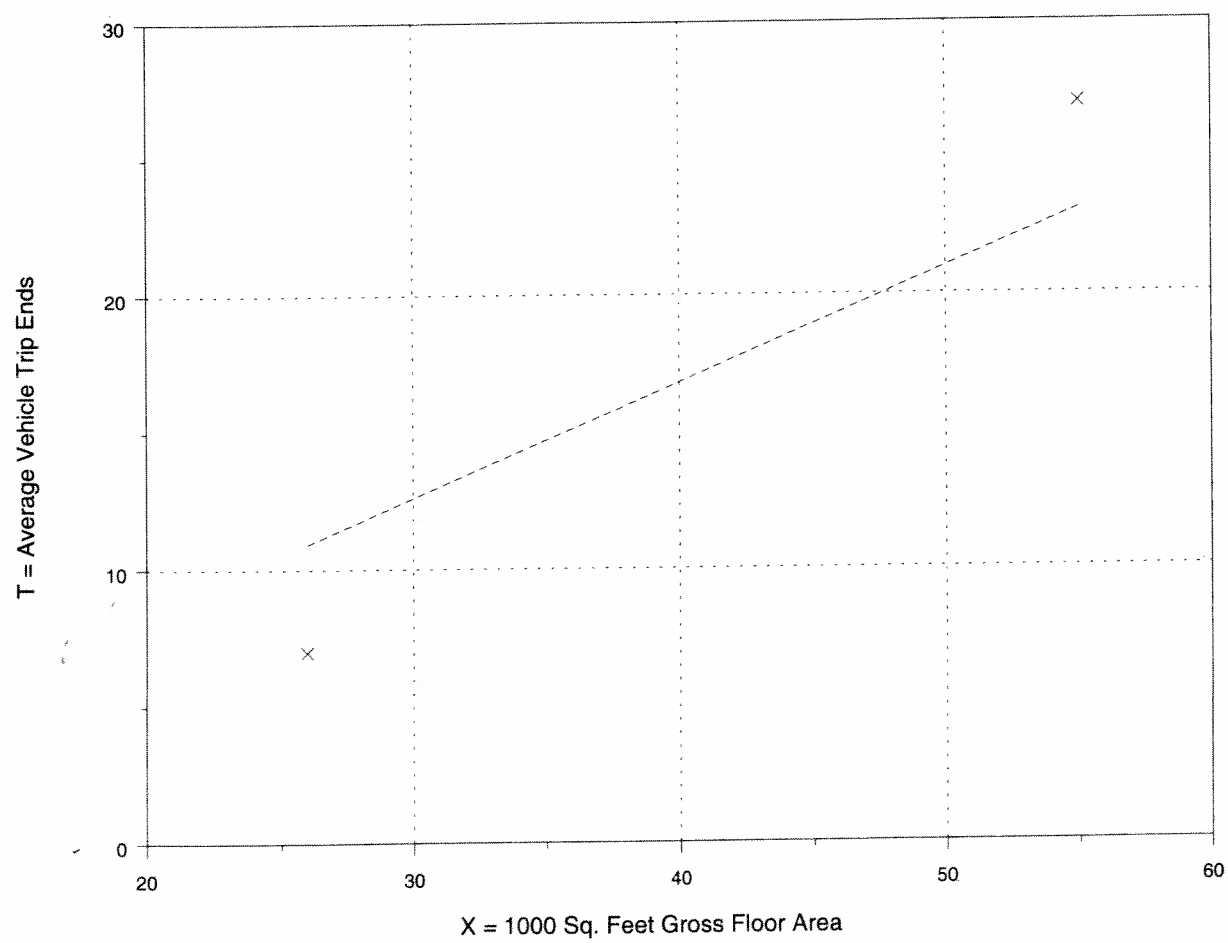
Number of Studies: 2
Average 1000 Sq. Feet GFA: 41
Directional Distribution: 47% entering, 53% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
0.42	0.27 - 0.49	*

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



× **Actual Data Points**

------ **Average Rate**

Fitted Curve Equation: Not given

R^2 = ****

Land Use: 720
Medical-Dental Office Building

Description

A medical-dental office building is a facility that provides diagnoses and outpatient care on a routine basis, but is unable to provide prolonged in-house medical and surgical care. This type of facility is generally operated by one or more private physicians or dentists.

Additional Data

The average vehicle occupancy for the six studies where information was submitted was approximately 1.37 persons per automobile. The vehicle occupancy rates ranged from 1.32 to 1.44 persons per automobile.

The sites were surveyed from the 1980s to the 1990s throughout the United States.

Source Numbers

8, 19, 98, 104, 109, 120, 157, 184, 209, 211, 253, 287, 294, 295, 304, 357, 384, 404, 407, 423, 444, 509

Medical-Dental Office Building
(720)

MOB

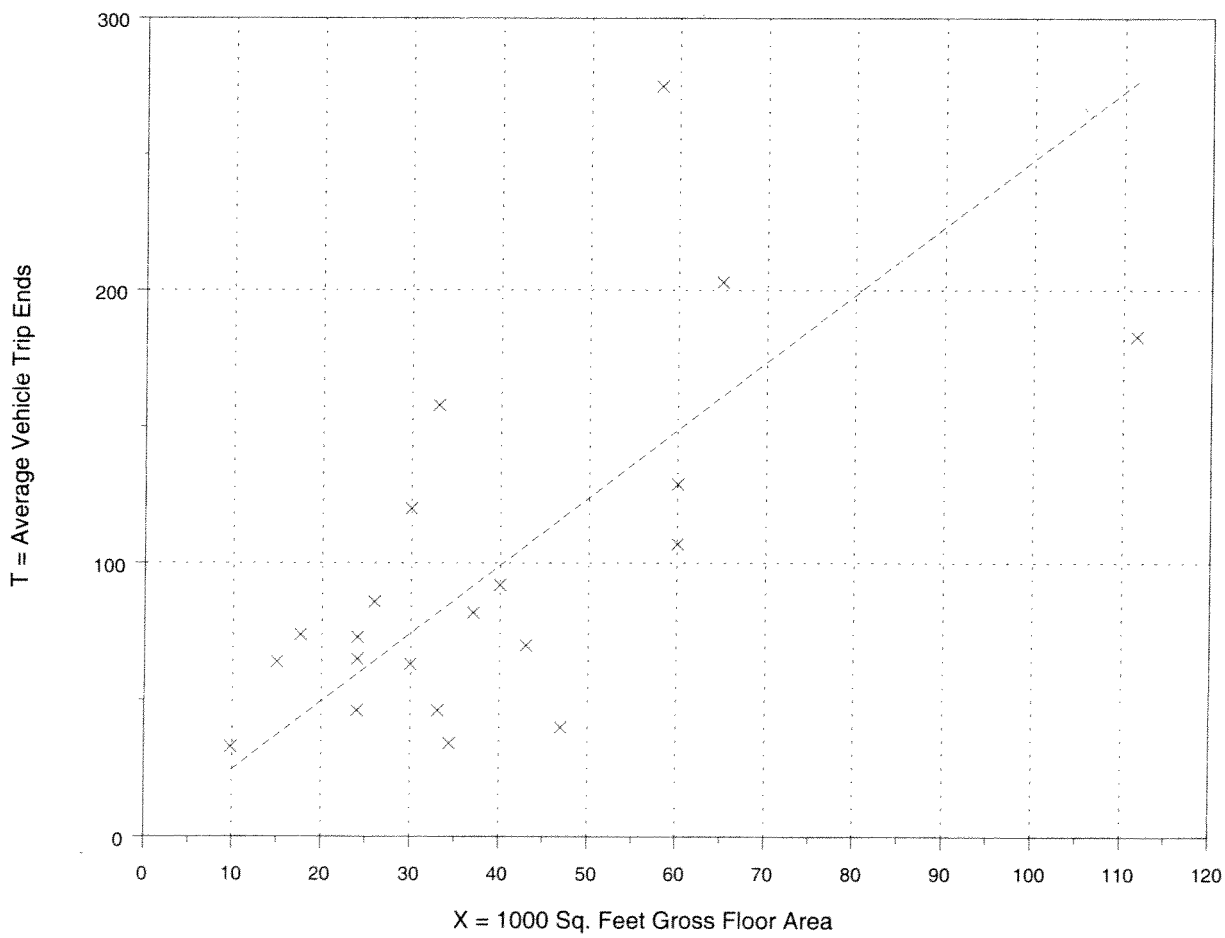
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 21
Average 1000 Sq. Feet GFA: 39
Directional Distribution: 79% entering, 21% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
2.48	0.85 - 4.79	1.94

Data Plot and Equation



× Actual Data Points

------ Average Rate

Fitted Curve Equation: Not given

R^2 = ****

Medical-Dental Office Building
(720)

MOB

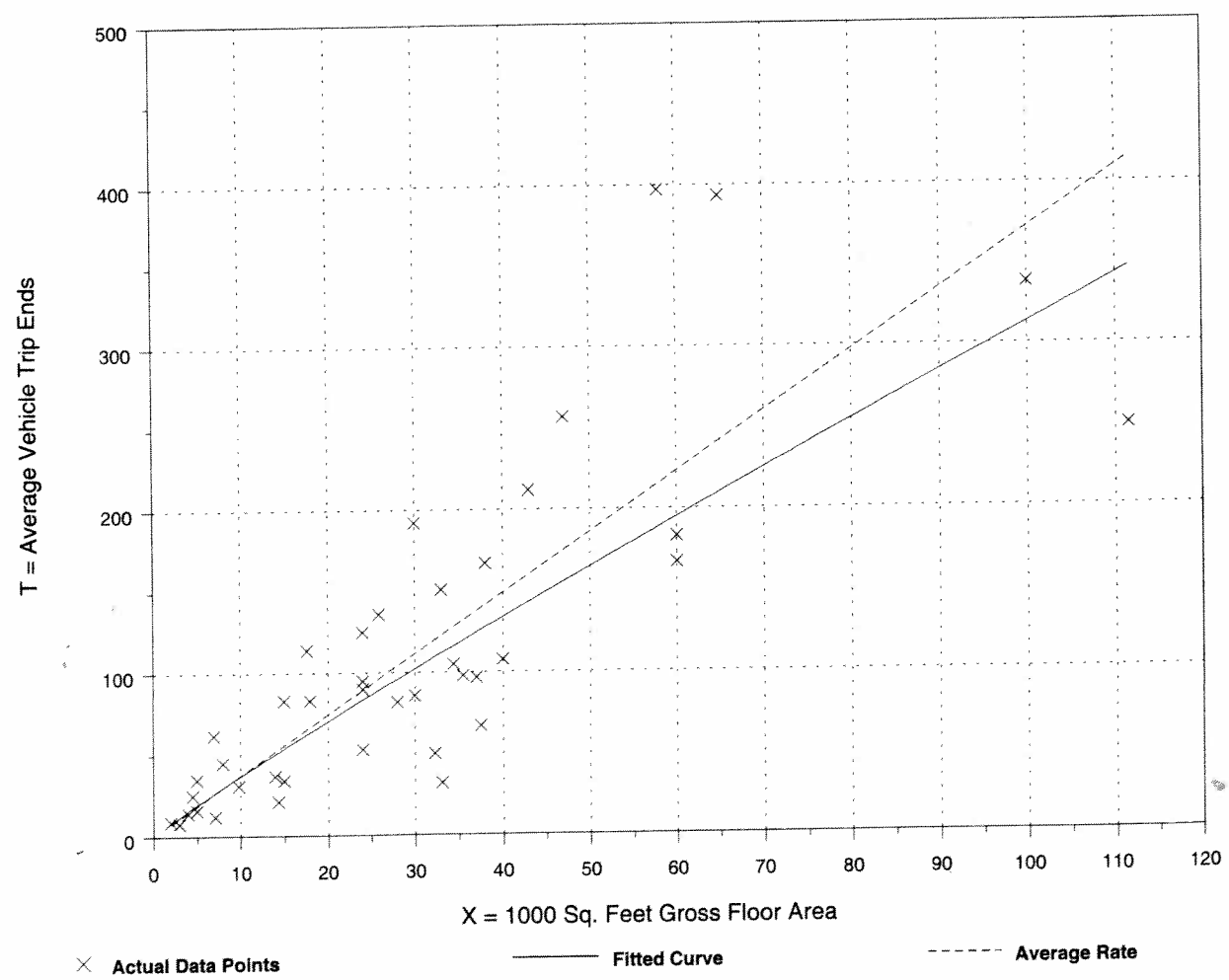
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 41
Average 1000 Sq. Feet GFA: 30
Directional Distribution: 27% entering, 73% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
3.72	0.97 - 8.86	2.50

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.93 Ln(X) + 1.47

R^2 = 0.77

Land Use: 760
Research and Development Center

Description

Research and development centers are facilities or groups of facilities devoted almost exclusively to research and development activities. The range of specific types of businesses contained in this land use varies significantly. Research and development centers may contain offices and light fabrication areas. General office building (Land Use 710), corporate headquarters building (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750) and business park (Land Use 770) are related uses.

Additional Data

Truck trips accounted for 1.84 percent of the weekday traffic at the research and development centers surveyed (range of 0.4 percent to 4.0 percent).

The average vehicle occupancy for the 13 studies where information was submitted was approximately 1.19 persons per automobile. The vehicle occupancy rates ranged from 1.10 to 1.33 persons per automobile.

The sites were surveyed from the 1960s to the 1990s throughout the United States.

Trip Characteristics

The trip generation for the a.m. and p.m. peak hours of the generator typically coincided with the peak hours of the adjacent street traffic; therefore, only one a.m. peak hour and one p.m. peak hour, which represent both the peak hour of the generator and the peak hour of the adjacent street traffic, are shown for research and development centers.

Source Numbers

9, 105, 213, 218, 253, 332, 384, 423

Research and Development Center
(760)

Research in AVI

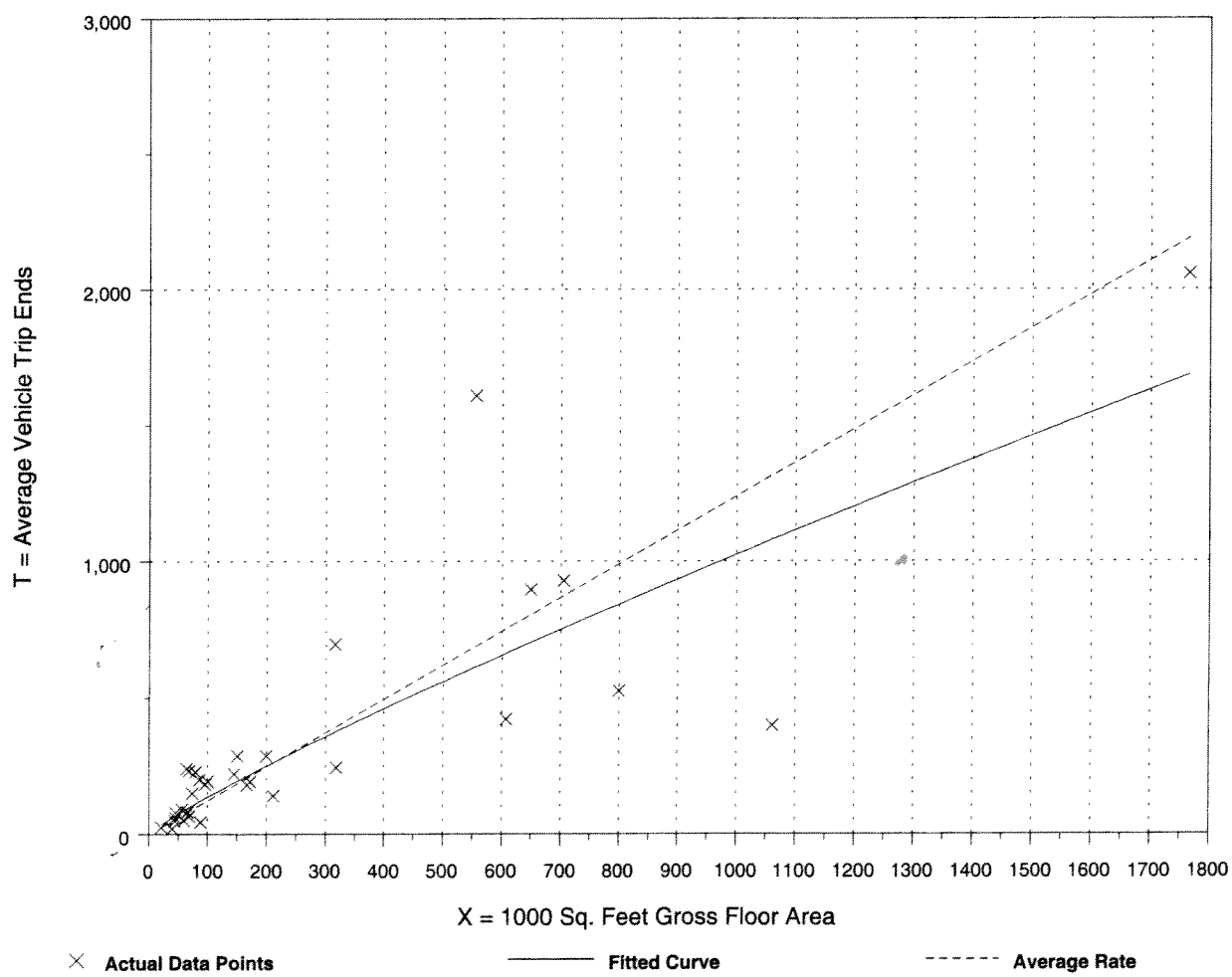
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
A.M. Peak Hour

Number of Studies: 32
Average 1000 Sq. Feet GFA: 279
Directional Distribution: 83% entering, 17% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.24	0.37 - 3.73	1.32

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.88 Ln(X) + 0.88 $R^2 = 0.75$

Research and Development Center
(760)

Research in AV

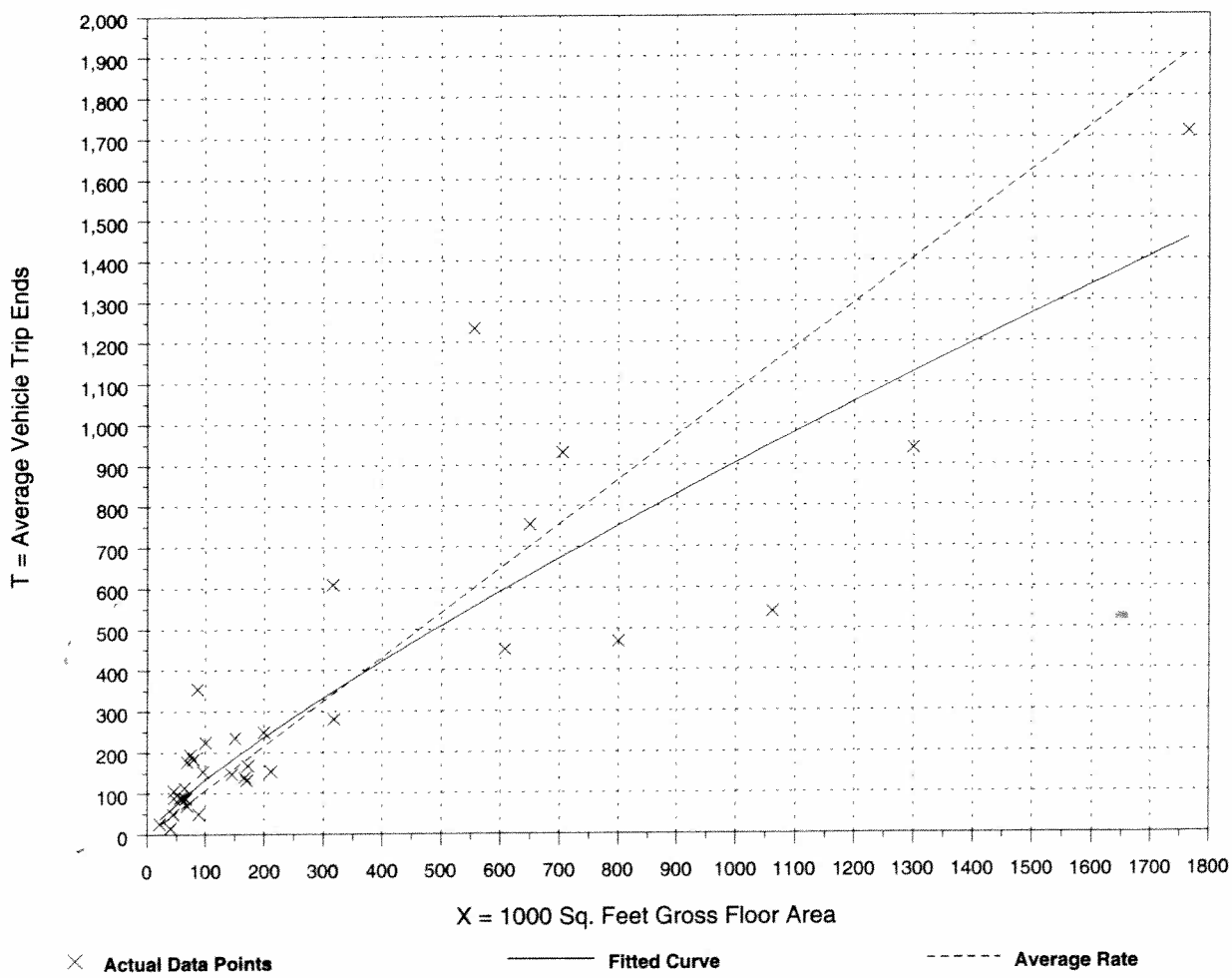
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
P.M. Peak Hour

Number of Studies: 34
Average 1000 Sq. Feet GFA: 306
Directional Distribution: 15% entering, 85% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.08	0.40 - 4.13	1.19

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.83 Ln(X) + 1.06

R^2 = 0.78

Land Use: 710
General Office Building

Description

A general office building houses multiple tenants; it is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building or buildings may contain a mixture of tenants including professional services; insurance companies; investment brokers; and tenant services, such as a bank or savings and loan institution, a restaurant or cafeteria and service retail facilities. Nearly all of the buildings surveyed were in suburban locations. Corporate headquarters (Land Use 714), single tenant office building (Land Use 715), office park (Land Use 750), research and development center (Land Use 760) and business park (Land Use 770) are related uses.

If information is known about individual buildings, it is suggested that the general office building category be used rather than office parks when estimating trip generation for one or more office buildings in a single development. The office park category is more general and should be used when a breakdown of individual or different uses is not known. If the general office building category is used and if additional buildings, such as banks, restaurants, or retail stores are included in the development, then the development should be treated as a multiuse project. On the other hand, if the office park category is used, internal trips are already reflected in the data and do not need to be considered.

When the buildings are interrelated (defined by shared parking facilities or the ability to easily walk between buildings) or house one tenant, it is suggested that the total area or employment of all the buildings be used for calculating the trip generation. When the individual buildings are isolated and not related to one another, it is suggested that trip generation be calculated for each building separately and then summed.

Additional Data

Average weekday transit trip ends—

> Transit service was either nonexistent or negligible at the majority of the sites surveyed in this land use. Users may wish to modify trip generation rates presented in this land use to reflect the presence of public transit, carpools and other transportation demand management (TDM) strategies. Information has not been analyzed to document the impacts of TDM measures on the total site generation. See the ITE *Trip Generation Handbook* for additional information on this topic.

The average building occupancy varied considerably within the studies where occupancy data was provided. For buildings with occupancy rates reported, the average percent of occupied gross leasable area was 88 percent.

Some of the regression curves plotted for this land use may produce illogical trip end estimates for small office buildings. When the proposed site size is significantly smaller than the average-sized facility published in this report, caution should be used when applying these statistics. For more information, please refer to Chapter 3, "Guidelines for Estimating Trip Generation," of the *Trip Generation Handbook*.

In some regions peaking may occur earlier or later and last somewhat longer than the traditional 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. peak period time frames.

The sites were surveyed from the 1960s to the 2000s throughout the United States.

General Office Building
(710)

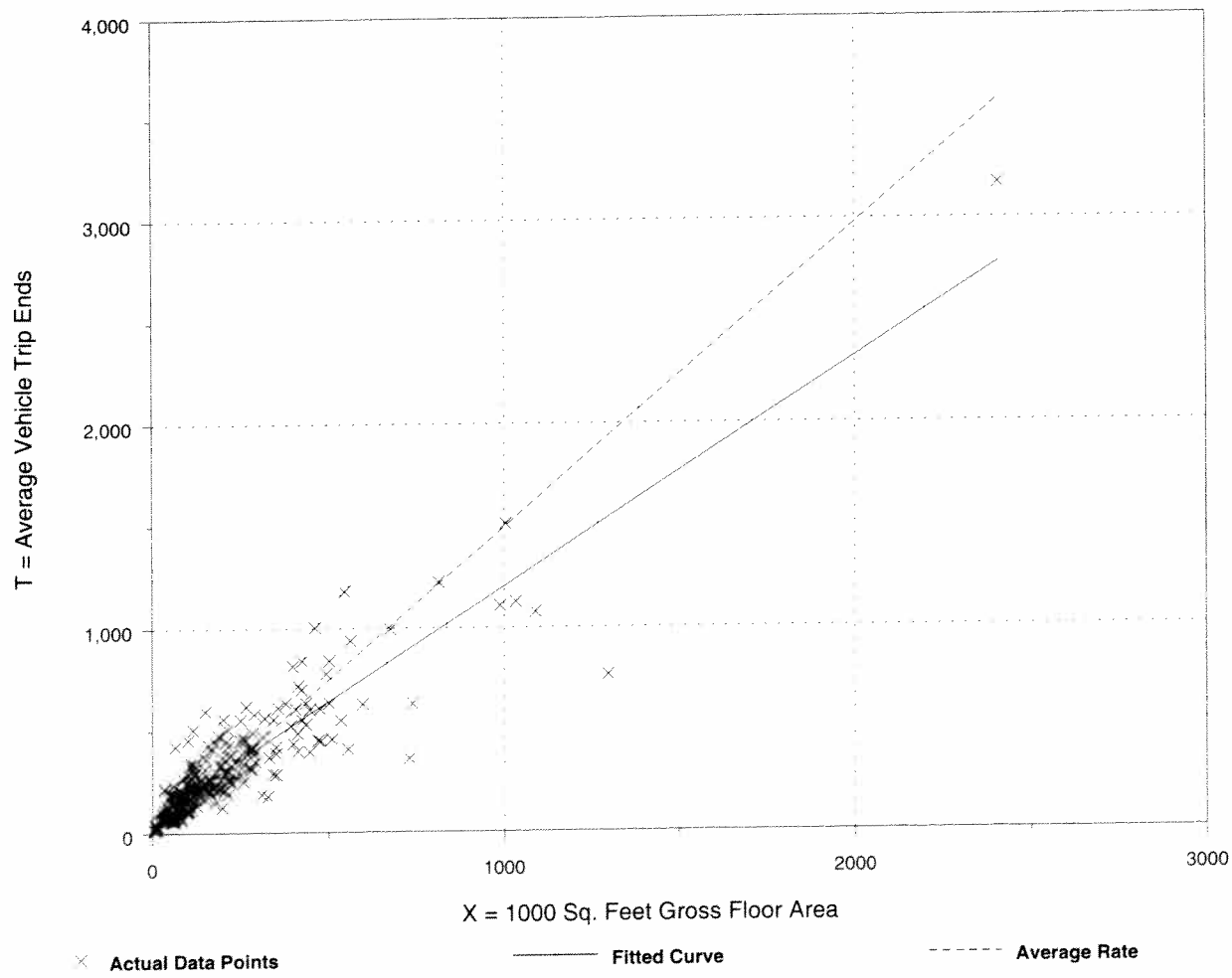
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
P.M. Peak Hour

Number of Studies: 235
Average 1000 Sq. Feet GFA: 216
Directional Distribution: 17% entering, 83% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.49	0.49 - 6.39	1.37

Data Plot and Equation



Fitted Curve Equation: T = 1.12(X) + 78.81

R^2 = 0.82

General Office Building
(710)

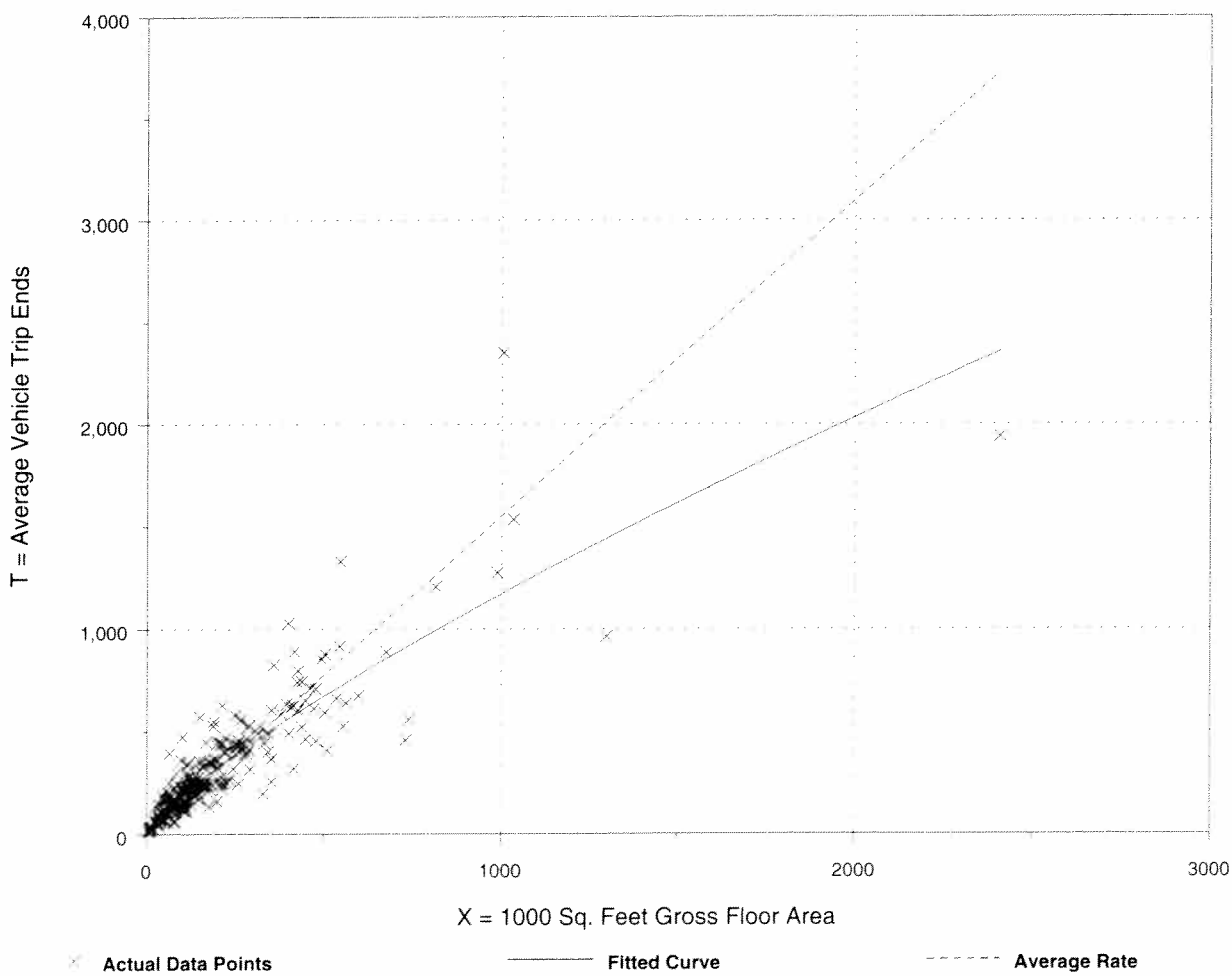
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
A.M. Peak Hour

Number of Studies: 217
Average 1000 Sq. Feet GFA: 223
Directional Distribution: 88% entering, 12% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.55	0.60 - 5.98	1.39

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.80 Ln(X) + 1.55 $R^2 = 0.83$

Land Use: 814
Specialty Retail Center

Description

Specialty retail centers are generally small strip shopping centers that contain a variety of retail shops and specialize in quality apparel; hard goods; and services, such as real estate offices, dance studios, florists and small restaurants. Shopping center (Land Use 820) is a related use.

Additional Data

The sites were surveyed from the late 1970s to the 2000s in California, Florida, Georgia, New York and Pennsylvania.

Source Numbers

100, 304, 305, 367, 423, 507, 577

Land Use: 820
Shopping Center

Description

A shopping center is an integrated group of commercial establishments that is planned, developed, owned and managed as a unit. A shopping center's composition is related to its market area in terms of size, location and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands. Specialty retail center (Land Use 814) and factory outlet center (Land Use 823) are related uses.

Additional Data

Shopping centers, including neighborhood centers, community centers, regional centers and super regional centers, were surveyed for this land use. Some of these centers contained non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs and recreational facilities (for example, ice skating rinks or indoor miniature golf courses). The centers ranged in size from 1,700 to 2.2 million square feet of gross leasable area (GLA). The centers studied were located in suburban areas throughout the United States and therefore represent typical U.S. suburban conditions.

Many shopping centers, in addition to the integrated unit of shops in one building or enclosed around a mall, include outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, restaurants, or small offices. Although the data herein do not indicate which of the centers studied included peripheral buildings, it can be assumed that some of the data show their effect.

The vehicle trips generated at a shopping center are based upon the GLA of the center. In cases of smaller centers without an enclosed mall or peripheral buildings, the GLA could be the same as the gross floor area of the building.

Separate equations have been developed for shopping centers during the Christmas shopping season. Plots were included for the weekday peak hour of adjacent street traffic and the Saturday peak hour of the generator.

Information on approximate hourly, monthly and daily variation in shopping center traffic is shown in Tables 1–4. It should be noted, however, that the information contained in these tables is based on a limited sample size. Therefore, caution should be exercised when applying the data. Also, some information provided in the tables may conflict with the results obtained by applying the average rate or regression equations. When this occurs, it is suggested that the results from the average rate or regression equations be used, as they are based on a larger number of studies.

Buffalo Niagara Medical Campus
North End Development Program
Trip Generation Analysis
October 2008

Project	Land Use	ITE Land Use	Units	Rate Daily	Rate AM	Rate PM	Equation Daily	Equation AM	Equation PM	AM In	AM Out	PM In	PM Out
GVI	Clinical Care	Hospital (610)	250.5 KSF	4401	301	296	4717	373	412	250	123	136	276
UB/JI	Research	R&D Center (760)	160 KSF	1298	198	173	1483	210	195	174	36	29	166
UB Clinical Research	Clinical Office	Medical/Dental OB (720)	15 KSF	542	37	56	398	--	54	29	8	15	41
UB Incubator	General Office	General Office (710)	40 KSF	444	62	60	659	90	124	79	11	21	103
To Be Added to BGH													
BGH - Relocated from Gates	Clinical Care	Hospital (610)	50 Beds	591	57	65	2104	-78	17	40	17	23	42
To Be Removed from BGH (trip credit)													
ED	Clinical Care	Hospital (610)	10.4 KSF	183	12	12	2313	155	241	8	4	4	8
Cardiac Arrest	Clinical Care	Hospital (610)	17 KSF	299	20	20	2379	161	246	14	7	7	13

Project	Land Use	ITE Land Use	Units	Rate Daily	Rate AM	Rate PM	Equation Daily	Equation AM	Equation PM	AM In	AM Out	PM In	PM Out
Medical Office Bldg	Outpatient	Medical/Dental OB (720)	220 KSF	7949	546	818	8781	--	656	431	115	221	597
	Lab	Light Industrial (110)	40 KSF	279	37	39	197	-42	-106	32	4	5	34
	Retail	Shopping Center*	40 KSF	429	10	38	936	23	85	14	9	41	44

Project	Land Use	ITE Land Use	Units	Rate Daily	Rate AM	Rate PM	Equation Daily	Equation AM	Equation PM	AM In	AM Out	PM In	PM Out
Kaleida Skilled Nursing Facility	Nursing Home	Nursing Home (620)	200 KSF	1220	76	84	--	--	--	40	36	39	45

Project	Land Use	ITE Land Use	Units	Rate Daily	Rate AM	Rate PM	Equation Daily	Equation AM	Equation PM	AM In	AM Out	PM In	PM Out
CMHC	Outpatient	Medical/Dental OB (720)	16.8 KSF**	607	42	62	472	--	60	33	9	17	46
		Grand Total	**982.3 KSF**							**1101**	**356**	**537**	**1371**

Used adjacent street traffic peak
* Reduce trips by 75% for internal capture rate associated with support retail
** Difference between existing (19,832 SF) and proposed (36,586 SF)
Blue script identifies data used in the analysis
Red script identifies trips to be subtracted due to relocations
Based on ITE Trip Generation Manual, 7th Edition

Mode Share
Based on 2000 CTPP data for Buffalo Metro Area

BNMC Mode Share	
Mode	**Percent**
Drive Alone	77.0%
Car Pool	
Transit	11.0%
Walk/Bike/Motor Bike	5.0%
Taxi/Other Means	0.0%
Telecommute	0.0%

Unadjusted Trip Generation

	AM In	AM Out	PM In	PM Out
GVI	250	123	136	276
UB/JI	174	36	29	166
UB Clinical Research	29	8	15	41
UB Incubator	79	11	21	103
BGH - Relocated from Gates	40	17	23	42
ED	8	4	4	8
Cardiac Arrest	14	7	7	13
Medical Office Bldg	431	115	221	597
Lab	32	4	5	34
Retail	14	9	41	44
Kaleida Skilled Nursing Facility	40	36	39	45
CMHC	33	9	17	46

Adjusted Trip Generation

	AM In	AM Out	PM In	PM Out
GVI	193	95	105	212
UB/JI	134	27	23	128
UB Clinical Research	23	6	12	31
UB Incubator	61	8	16	79
BGH - Relocated from Gates	30	13	18	32
ED	6	3	3	6
Cardiac Arrest	11	5	5	10
Medical Office Bldg	332	88	170	460
Lab	25	3	4	27
Retail	11	7	32	34
Kaleida Skilled Nursing Facility	31	28	30	34
CMHC	25	7	13	35
GRAND TOTAL	**848**	**274**	**413**	**1056**
ROUNDED GRAND TOTAL	**850**	**275**	**415**	**1055**