Legislative ID# 120521A

CORRIDOR OPERATIONAL ASSESSMENT

NW 8th Avenue from NW 34th Street (SR 121) to NW 31st Drive
City of Gainesville, Alachua County, Florida

FINAL DRAFT

Prepared for:

City of Gainesville Public Works Department
Gainesville, Florida

Prepared by:

Comprehensive Engineering Services, Inc.
201 South Orange Avenue, Suite 1300
Orlando, Florida 32801

May 2012
CES #09018.02

PROFESSIONAL ENGINEER CERTIFICATION

I hereby certify that I am a registered professional engineer in the State of Florida practicing engineering with **Comprehensive Engineering Services, Inc. (CES)**, and that I have supervised the preparation of and approve the analysis, findings, opinions, conclusions, and technical advice hereby reported for:

PROJECT: Corridor Operational Assessment – NW 8th Avenue from NW 34th Street (SR 121) to NW 31st Drive
City of Gainesville, Alachua County, FL

The engineering work represented by this document was performed through the following duly authorized engineering business:

Comprehensive Engineering Services, Inc.
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Engineering Business Number (Board of Professional Engineers): **7862**
Expires 2/28/13

This report includes a discussion of existing study corridor conditions and presents an evaluation of existing signalized and stop-controlled intersection operations under both existing conditions and geometric modifications proposed by the City of Gainesville. The evaluations were conducted using Synchro traffic analysis software in consideration of traffic data and signal timing information provided by the City of Gainesville. I acknowledge that the procedures and references used to develop the results contained in this document are standard to the professional practice of transportation and traffic engineering as applied through professional judgment and experience.

Any engineering analysis, documents, conclusions or recommendations relied upon from other professional sources or provided with responsibility by the client are referenced accordingly in the following report.

FLORIDA PROFESSIONAL ENGINEER:

Chad A. Rohde, P.E.
Name

REGISTRATION NUMBER: FL #59483.

SIGNATURE: _____.

DATE: _____.

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FIGURES AND TABLES

1. PURPOSE AND SCOPE:

The purpose of this study is to conduct and document operational analyses of two adjacent intersections along NW 8th Avenue in the City of Gainesville, Florida. The intersection at NW 34th Street (SR 121) is signalized and the unsignalized T-intersection of NW 31st Drive is located approximately 1,000 feet east of NW 34th Street.

This study was requested by the City of Gainesville to initially evaluate the operational impacts associated with reducing NW 8th Avenue from a four-lane urban facility to a two-lane urban facility between NW 34th Street and NW 31st Drive. It was also assumed that a single westbound lane and a single eastbound lane will be provided along NW 8th Avenue through the intersection with NW 31st Drive and the existing inside eastbound through lane approaching NW 31st Drive will "drop" as a designated left turn lane to NW 31st Drive.

An additional geometric alternative at the intersection of NW 8th Avenue at NW 31st Drive consisted of providing a single westbound lane through the intersection and two eastbound through lanes at the intersection. The single westbound through lane would facilitate the construction of an exclusive eastbound left turn lane which would develop between NW 34th Street and NW 31st Drive and would also coincide with where the single westbound lane approaching NW 34th Street would widen to provide two westbound through lanes.

The operational impacts estimated as part of this study were based solely on Synchro Software assessments of the study intersections and corridor. The Synchro model was provided by the City of Gainesville in addition to traffic data and signal timing information. Per the request of the City of Gainesville, the analyses were limited solely to the traffic data provided the City of Gainesville and no projection of this data to a future year condition was conducted for subsequent analyses.

2. EXISTING AND PROPOSED CONDITIONS:

TYPCIAL SECTIONS AND SPEED LIMITS

The existing typical section of NW 8th Avenue between NW 34th Street and NW 31st Drive is a four-lane urban, undivided roadway. The distance between the intersections NW 34th Street and NW 31st Drive is approximately 1,000 feet. The posted speed limit along NW 8th Avenue is 35 MPH from NW 36th Terrace to east of NW 31st Drive. The existing typical section of NW 34th Street is a three-lane urban typical section in the vicinity of NW 8th Avenue and the posted speed limit is also 35 MPH. NW 31st Drive is a two-lane local roadway which extends north from NW 8th Avenue and includes a 25 MPH posted speed limit. A location map is included on the following page as Figure 1.

LOCAL DEVELOPMENT

Development along NW 8th Avenue west of NW 34th Street is primarily residential. Residential development also exists along NW 34th Street both north and south of NW 8th Avenue. East of NW 34th Street, there is no development fronting NW 8th Avenue. NW 31st Drive provides access to residences located north of NW 8th Avenue.

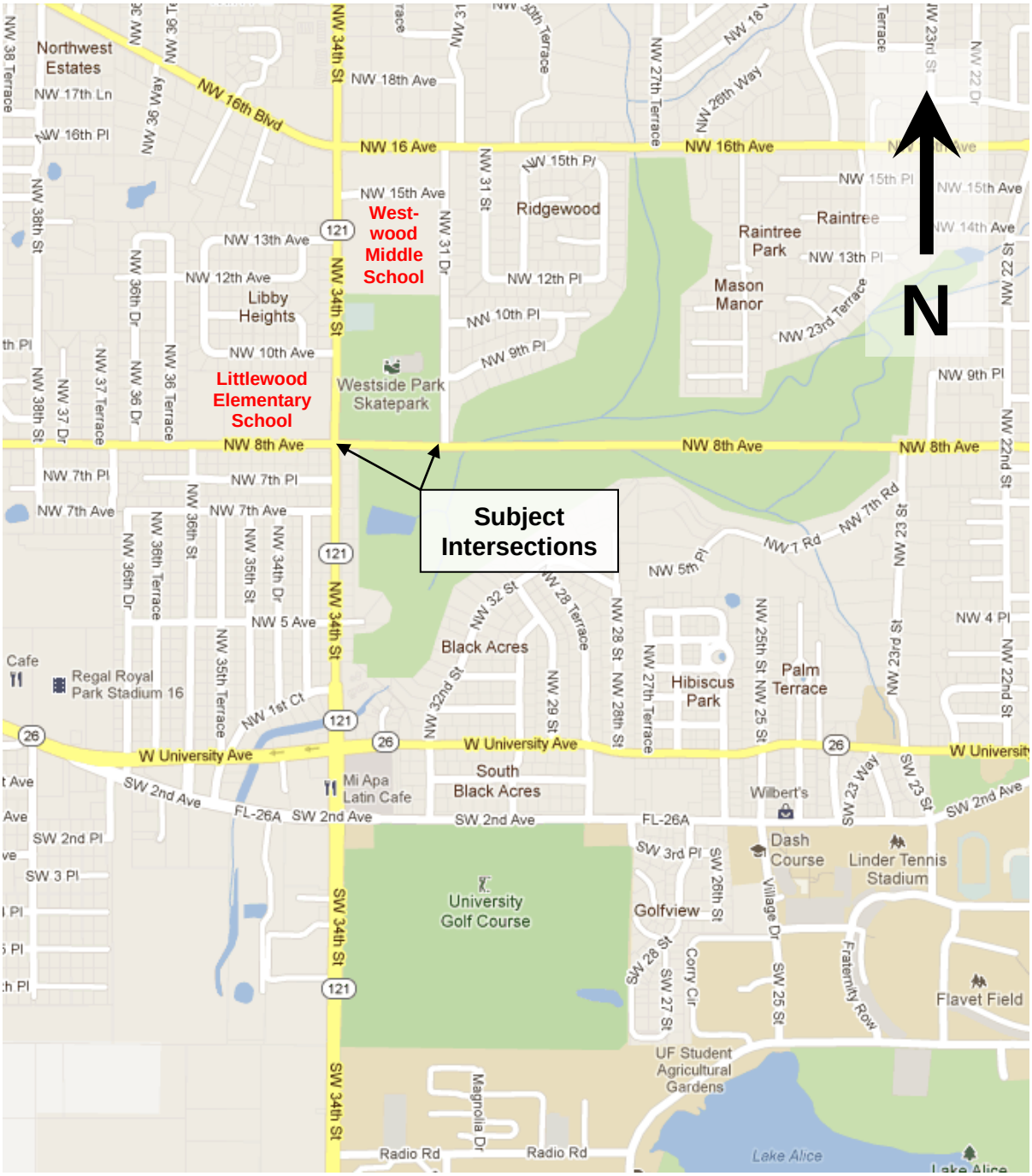
Local generators near the subject corridor include the Westside Park, located along the north side of NW 8th Avenue between NW 34th Street and NW 31st Drive, Littlewood Elementary School, located in the northwest quadrant of the intersection of NW 8th Avenue and NW 34th Street, and Westwood Middle School, located just north of Westside Park. Primary access to Westside Park is via NW 34th Street with secondary access via NW 31st Drive. Access to Littlewood Elementary School is via NW 34th Street (school buses only) and NW 8th Avenue (general parking / parent drop-off and pick-up). Access to Westwood Middle School is via both NW 31st Drive and NW 15th Avenue.

EXISTING TRAFFIC CONTROL

The intersection of NW 8th Avenue and NW 34th Street is currently signalized with protective-permissive left turn phasing for all approaches. Pedestrian crosswalks are provided across all intersection approach legs and “No Trucks” signage is posted along both NW 8th Avenue departure legs. Geometry at the intersection includes an exclusive, designated left turn lane along each approach. Two westbound and two eastbound lanes are provided along the NW 8th Avenue approaches and single northbound and southbound approach lanes are provided along NW 34th Street. No designated right turn lanes are provided for any approach to the intersection.

The intersection of NW 8th Avenue at NW 31st Drive is a T-intersection with stop-control provided for the southbound NW 31st Drive approach only. Pedestrian crosswalks are provided across the west and north legs of the intersection only. At this intersection, NW 8th Avenue is an urban four-lane undivided section and there are no designated left turn lanes or right turn lanes at the intersection. The NW 31st Drive approach is a single lane approach without auxiliary lanes.

FIGURE 1: PROJECT LOCATION MAP



Traffic control associated with the schools includes designated reduced school speed limit zones with posted 20 MPH speed limits. These school zones are present along the following segments:

- NW 8th Avenue from just east of NW 36th Street to east of NW 34th Street
- NW 34th Street from just south of NW 7th Avenue to south of NW 10th Avenue
- NW 34th Street from just south of NW 15th Street to south of NW 16th Avenue
- NW 31st Drive between NW 10th Place and NW 16th Avenue
- NW 15th Avenue between NW 34th Street and NW 31st Drive.

A vicinity map is included as Figure 2 which details the local schools and designated reduced school speed limit zones.

Beyond the immediate vicinity of the subject corridor, the next adjacent signalized intersections are at the following locations along each corridor.

TABLE 1: Local Signalized Intersections

Signalized Intersection	Approximate Location
NW 8th Avenue at NW 43rd Street	1 mile west of NW 34th Street
NW 8th Avenue at NW 22nd Street	1 mile east of NW 34th Street
NW 34th Street at West University Avenue	½ mile south of NW 8th Avenue
NW 34th Street at NW 16th Avenue	½ mile north of NW 8th Avenue

As reflected in Table 1, the nearest signals are at least ½ mile from the signalized intersection of NW 8th Avenue at NW 34th Street.

PROPOSED TRAFFIC CONTROL

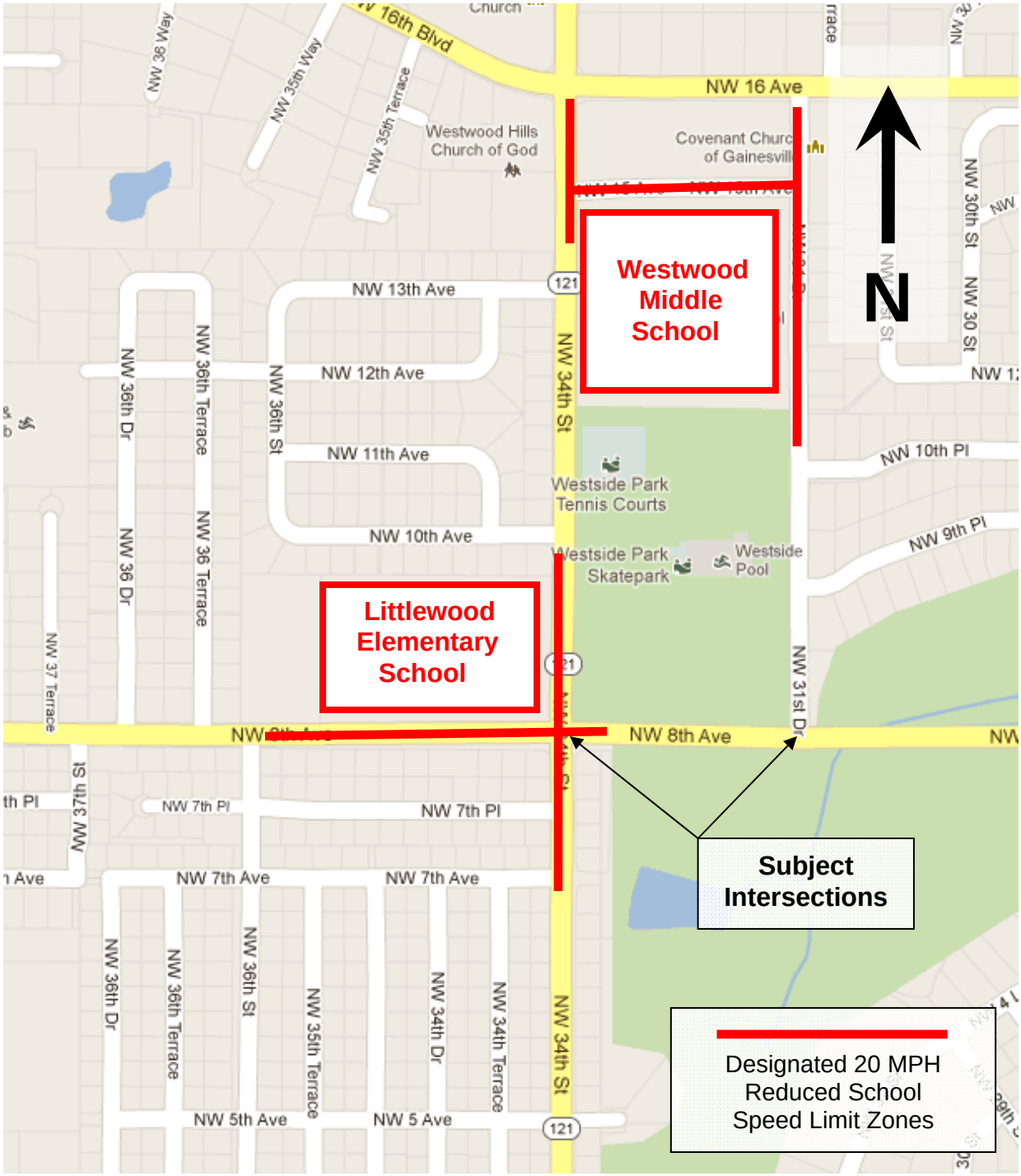
Alternative A:

The primary geometric modification to the study area which is currently under consideration by the City of Gainesville is to convert NW 8th Avenue from a four-lane urban undivided facility to a two-lane urban divided facility between NW 34th Street and NW 31st Drive. Based upon the planned modifications, a single westbound lane and single eastbound lane will be provided along NW 8th Avenue through the intersection with NW 31st Drive and the existing inside eastbound through lane approaching NW 31st Drive will “drop” as a designated left turn lane onto NW 31st Drive.

Alternative B:

A secondary geometric modification which was evaluated at the request of the City of Gainesville included maintaining two eastbound through lanes along NW 8th Avenue at the NW 31st Drive intersection and providing a single westbound through movement along NW 8th Avenue. This single westbound lane would facilitate the construction of an exclusive eastbound left turn lane along NW 8th Avenue at NW 31st Drive. The beginning of this left turn lane would coincide with the location where the single westbound through lane approaching NW 34th Street would widen to provide two approach lanes. An added improvement requested by the City of Gainesville was to evaluate the NW 31st Drive approach with exclusive left and right turn lanes.

FIGURE 2: VICINITY MAP



3. TRAFFIC VOLUMES:

Traffic data utilized for the operational assessments was provided by the City of Gainesville in the form of turning movement counts at the two subject intersections. This information is included as Appendix A. The traffic data was collected on Tuesday, September 27, 2011 and Thursday, September 29, 2011 for the periods 7:00 AM to 6:00 PM each day. The average volumes over the two-day collection periods were considered in this assessment. Five time-of-day periods were evaluated as part of this study as follows:

- Morning Peak Hour (8:00 AM to 9:00 AM)
- Midday Hour (11:30 AM to 12:30 PM)
- Afternoon 1: End of Littlewood Elementary School (1:30 PM to 2:30 PM)
- Afternoon 2: End of Westwood Middle School (3:15 PM to 4:15 PM)
- Evening Peak Hour (4:45 PM to 5:45 PM)

The "Afternoon 1" hour noted above was selected based upon Littlewood Elementary School's operational hours for the two days when traffic data was collected, which was reportedly from 7:45 AM until 1:45 PM. Additionally, the "Afternoon 2" hour noted above was selected based upon Westwood Middle School's operational hours which were from 9:10 AM until 3:35 PM.

The associated analysis hour volumes for the NW 34th Street and NW 31st Drive intersections are summarized in Tables 2 and 3, respectively.

TABLE 2: NW 8th Avenue at NW 34th Street Analysis Hour TMCs

Period	Eastbound			Westbound			Northbound			Southbound		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
AM Peak	74	442	54	148	357	29	33	352	96	31	433	64
Midday	78	350	64	114	306	39	42	428	98	32	490	62
Afternoon 1	69	365	56	112	326	40	60	391	122	33	436	71
Afternoon 2	88	444	42	144	438	43	60	408	154	46	438	74
PM Peak	130	538	68	202	621	75	81	597	136	56	551	96

TABLE 3: NW 8th Avenue at NW 31st Drive Analysis Hour TMCs

Period	Eastbound		Westbound		Southbound	
	Left	Through	Through	Right	Left	Right
AM Peak	34	514	474	34	52	58
Midday	14	450	440	15	8	18
Afternoon 1	28	494	460	10	19	23
Afternoon 2	61	603	575	51	43	82
PM Peak	50	642	784	58	15	45

4. OPERATIONAL AND QUEUE ANALYSES:

Turning movement volumes summarized in Section 3 were the basis for the operational and queue analyses. A peak hour factor of 0.90 was assumed for both intersections for all analysis periods. Actual NW 8th Avenue intersection peak hour factors ranged from 0.83 – 0.98 at NW 34th Street and 0.88 – 0.94 at NW 31st Drive.

The City of Gainesville provided a Synchro Software Base Model to assist in the operational assessments. The model was modified to reflect the two subject intersections only. The adjacent signalized intersections in each direction were considered beyond the influence of the study area.

Signal timing information was also provided by the City for the signalized intersection of NW 8th Avenue at NW 34th Street and this information is included as Appendix B. Subsequent to entering this base timing information into the Synchro models, the models were allowed to optimize phase split timings within the programmed cycle lengths. This was performed in an attempt to better emulate the existing operating conditions as this is an actuated signal. Based on the signal timing information provided, the cycle lengths for the morning, midday and early afternoon analysis hours were set to 90 seconds and the cycle length for the second afternoon hour and evening peak hour was set to 162 seconds. The operational results obtained from Synchro for all analysis hours under existing geometric conditions are included as Appendix C.

EXISTING CONDITIONS: OPERATIONAL & QUEUE ESTIMATES

Operational Conditions:

The results of the operational assessments presented in Appendix C show that both of the study intersections operate with acceptable levels of service throughout the majority of a typical weekday. However, the signal at NW 34th Street reaches near-capacity conditions during the PM peak hour. The results of the assessments are summarized in the following table and present the average control delay per vehicle and the associated Highway Capacity Manual Level of Service as reported by Synchro Software.

TABLE 4: Existing Operational Conditions

Analysis Period	NW 34th Street Intersection				NW 31st Drive Intersection			
	Signal Cycle Length	Signal Delay	HCM LOS	Max. v/c	Eastbound Left Turn		Sidestreet Approach	
					Control Delay	HCM LOS	Control Delay	HCM LOS
AM Peak	90”	29.8”	C	0.85	1.8”	A	18.2”	C
Midday	90”	29.8”	C	0.84	0.8”	A	12.0”	B
Afternoon 1	90”	29.4”	C	0.82	1.5”	A	13.8”	B
Afternoon 2	162”	38.2”	D	0.84	2.8”	A	19.8”	C
PM Peak	162”	55.8”	E	0.92	2.7”	A	17.7”	C

Queuing Assessments:

Due to the proximity of the two study intersections, the associated anticipated queue lengths generated from each intersection were also documented. As shown in the following table, and coinciding with the longer signal cycle lengths, the queues generated from the signal at NW 34th Street are longest during the evening peak period. The maximum average queue lengths anticipated at the unsignalized intersection of NW 31st Drive were all generally found to be less than one vehicle in length (queue lengths therefore presented as one vehicle length). It should be noted that the eastbound left turn queues at NW 31st Drive do not include the influence of any “trapped” or delayed through vehicles that are intending to continue eastbound but become temporarily queued behind left turning vehicles. Slightly longer queues were evident along the NW 31st Drive approach during the morning and second afternoon period and appear to be the result of school-related traffic activity

TABLE 5: Existing Estimated Queue Lengths

Analysis Period	NW 34th Street Intersection Through Lane Group Approaches								NW 31st Drive Intersection	
	Eastbound		Westbound		Northbound		Southbound		EB Left Turn Max.	SB Appr. Max.
	Ave.	Max.	Ave.	Max.	Ave.	Max.	Ave.	Max.		
AM Peak	140’	200’	100’	150’	220’	360’	260’	450’*	25’	50’
Midday	120’	170’	100’	140’	280’	490’*	290’	520’*	25’	25’
Afternoon 1	120’	170’	100’	150’	270’	470’*	260’	470’*	25’	25’
Afternoon 2	190’	320’	180’	300’	390’	660’	330’	570’	25’	50’
PM Peak	360’	490’*	400’	500’*	770’	1050’*	620’	800’	25’	25’

*Queue may be longer as associated volume exceeds capacity

ALTERNATIVE A: OPERATIONAL, QUEUE & MERGE ESTIMATES

Operational Conditions:

Alternative A geometric modifications currently under consideration by the City of Gainesville were applied to each of the Synchro models for the five analysis periods. Intersection geometry at the intersection of NW 8th Avenue and NW 31st Drive was modified from existing conditions to provide a single eastbound and westbound through lane with an exclusive eastbound left turn lane. The side street (NW 31st Drive) approach was maintained as a single lane. No changes to the intersection of NW 8th Avenue at NW 34th Street were provided by the City of Gainesville as part of this alternative. The Synchro Software results of the operational assessments under the aforementioned geometric conditions are presented in Appendix D and are summarized in the following table.

TABLE 6: Operational Conditions with Alternative A Geometry

Analysis Period	NW 34th Street Intersection				NW 31st Drive Intersection			
	Signal Cycle Length	Signal Delay	HCM LOS	Max. v/c	Eastbound Left Turn		Sidestreet Approach	
					Control Delay	HCM LOS	Control Delay	HCM LOS
AM Peak	90”	29.5”	C	0.85	8.7”	A	32.0”	D
Midday	90”	29.4”	C	0.84	8.4”	A	14.6”	B
Afternoon 1	90”	28.9”	C	0.82	8.6”	A	18.6”	C
Afternoon 2	162”	37.9”	D	0.84	9.3”	A	52.8”	F
PM Peak	162”	55.3”	E	0.91	10.3”	B	41.7”	E

As shown above, no notable operational changes are anticipated at the signalized intersection of NW 34th Street as no geometric or timing modifications are proposed. Negative operational impacts at the unsignalized intersection of NW 31st Drive are anticipated due to the reduction in the number of through lanes along NW 8th Avenue. Reducing the number of through lanes, from four to two, increases the density of traffic per lane and reduces the number of adequate vehicular gaps. This is evidenced by the increased delay for turning movements, most notably during periods when traffic volumes are higher along either NW 8th Avenue or NW 31st Drive. As compared to existing geometric conditions, average vehicular delay for the eastbound left turn movement is anticipated to increase from a maximum of 3 to 10 seconds. Also compared to existing geometric conditions, average delay for the southbound (NW 31st Drive) approach is anticipated to increase from a maximum of 20 to 53 seconds per vehicle.

Queuing Assessments:

The associated anticipated queue lengths generated from each intersection and time-of-day condition were documented and compared to existing estimated queue lengths. As shown in the following table, minimal changes are anticipated for the NW 34th Street intersection queues. More notable changes are anticipated at the NW 31st Drive intersection as the maximum average side street queue lengths are anticipated to increase from approximately two vehicles to over four vehicles during the late afternoon period (Afternoon 2). Average maximum queue lengths for the eastbound left turn movement are anticipated to remain less than one vehicle throughout a typical weekday.

TABLE 7: Estimated Queue Lengths with Alternative A Geometry

Analysis Period	NW 34th Street Intersection Through Lane Group Approaches								NW 31st Drive Intersection	
	Eastbound		Westbound		Northbound		Southbound		EB Left Turn Max.	SB Appr. Max.
	Ave.	Max.	Ave.	Max.	Ave.	Max.	Ave.	Max.		
AM Peak	140’	200’	100’	150’	220’	350’	260’	450’*	25’	60’
Midday	120’	170’	90’	140’	270’	480’*	290’	520’*	25’	25’
Afternoon 1	120’	170’	100’	140’	250’	460’*	260’	460’*	25’	25’
Afternoon 2	190’	320’	170’	290’	380’	650’	340’	570’	25’	110’
PM Peak	360’	490’*	400’	500’*	760’	1040’*	620’	800’	25’	50’

*Queue may be longer as associated volume exceeds capacity

Merge Operations:

Additional operational concerns which will result from the proposed geometric modifications associated with Alternative A will be the deceleration and queues associated with the eastbound lane drop along NW 8th Avenue at the NW 31st Drive intersection and the effective eastbound two-to-one lane merge condition which will occur immediately upstream of this lane drop. The distance available to complete these two operations was estimated at 875 feet, measured from just east of the NW 34th Street intersection to the effective stop location for eastbound left-turning vehicles at NW 31st Drive.

As previously noted, the eastbound left turn queue lengths at NW 31st Drive are not anticipated to exceed one vehicle in length (estimated 25 feet maximum). In combination with a deceleration distance of approximately 100 feet (for 40 to 0 MPH), and an assumed perception-reaction time of 2 seconds (or 120 feet traveled), a total length of 245 feet is anticipated to accommodate the eastbound left turn maneuver at NW 31st Drive.

Assuming an operating speed of 40 MPH, the effective two-to-one lane merge distance was estimated at 320 feet per the formula $WS^2/60$ where W represents lane width (in feet) and S represents operating speed (in MPH).

The total length required to complete the aforementioned operations is estimated at 565 feet. As this distance is approximately 310 feet less than the available distance along NW 8th Avenue between NW 34th Street and NW 31st Drive, it suggests that both maneuvers can be accommodated within this area without interfering with each other.

ALTERNATIVE B: OPERATIONAL, QUEUE & STORAGE ESTIMATES

Operational Conditions:

Alternative B geometric modifications were also applied to each of the Synchro models for the five analysis periods. Intersection geometry at the intersection of NW 8th Avenue and NW 31st Drive was modified from existing conditions to provide a single westbound through lane and an exclusive eastbound left turn lane. The two eastbound through lanes were maitained along NW 8th Avenue however the side street (NW 31st Drive) approach was analyzed with exclusive left and right turn lanes. No changes to the intersection of NW 8th Avenue at NW 34th Street were provided by the City of Gainesville as part of this alternative. The Synchro Software results of the operational assessments under these geometric conditions are presented in Appendix E and are summarized in the following table.

TABLE 8: Operational Conditions with Alternative B Geometry

Analysis Period	NW 34th Street Intersection				NW 31st Drive Intersection			
	Signal Cycle Length	Signal Delay	HCM LOS	Max. v/c	Eastbound Left Turn		Sidestreet Approach	
					Control Delay	HCM LOS	Control Delay	HCM LOS
AM Peak	90”	29.5”	C	0.85	8.7”	A	18.5”	C
Midday	90”	29.4”	C	0.84	8.5”	A	13.5”	B
Afternoon 1	90”	28.9”	C	0.82	8.6”	A	14.9”	B
Afternoon 2	162”	37.9”	D	0.84	9.3”	A	20.5”	C
PM Peak	162”	55.3”	E	0.91	10.4”	B	22.8”	C

As shown above, no notable operational changes are again anticipated at the signalized intersection of NW 34th Street as no geometric or timing modifications are proposed. Delays for eastbound left turning vehicles from NW 8th Avenue onto NW 31st Drive are anticipated to be similar to those in Alternative A and are approximately 10 seconds or less. Notable operational improvements are anticipated for the southbound NW 31st Drive approach if exclusive left and right turn lanes are provided. In comparison to Alternative A (Table 6), the Afternoon 2 and PM Peak hour delays are anticipated to improve from a LOS F/E, to LOS C for both periods. The resulting delays for Alternative B are also anticipated to be similar to those which currently exist along the NW 31st Drive approach (Table 4).

Queuing Assessments:

The associated anticipated queue lengths generated from each intersection and time-of-day condition were again documented and compared to existing and Alternative A estimated queue lengths. As shown in the following table, minimal changes are anticipated for the NW 34th Street intersection queues. More notable changes are anticipated at the NW 31st Drive intersection as the maximum average side street queue lengths throughout the day are anticipated to reduce to one vehicle for both the left turn and right turn movements. These approach queues are less than those anticipated for Alternative A (Table 7) as well as existing conditions (Table 5).

TABLE 9: Estimated Queue Lengths with Alternative B Geometry

Analysis Period	NW 34th Street Intersection Through Lane Group Approaches								NW 31st Drive Intersection	
	Eastbound		Westbound		Northbound		Southbound		EB Left Turn Max.	SB Appr. Max.
	Ave.	Max.	Ave.	Max.	Ave.	Max.	Ave.	Max.		
AM Peak	140’	200’	100’	150’	220’	350’	260’	450’*	25’	25’
Midday	120’	170’	90’	140’	270’	480’*	290’	520’*	25’	25’
Afternoon 1	120’	170’	100’	140’	260’	460’*	260’	460’*	25’	25’
Afternoon 2	190’	320’	170’	290’	380’	650’	340’	570’	25’	25’
PM Peak	360’	490’*	400’	500’*	760’	1040’*	620’	800’	25’	25’

*Queue may be longer as associated volume exceeds capacity

Storage Considerations:

Operational concerns from the proposed geometric modifications associated with Alternative B will result from the location of the back-to-back transition point between the eastbound left turn lane along NW 8th Avenue at NW 31st Drive and the beginning of the second westbound through lane along NW 8th Avenue approaching NW 34th Street. As detailed in Table 9, the eastbound left turn queues are not anticipated to exceed one vehicle throughout the day. As such, a minimum length turn lane per the FDOT Standard Index should provide sufficient storage capacity. For an assumed design speed of 40 MPH, the recommended turn lane length (including 50 foot queue storage) totals 205 feet. As previously noted, the distance between the westbound stop bar at NW 34th Street and the effective stop location for eastbound left turns at NW 31st Drive is approximately 875 feet. Excluding the 205 foot left turn lane as described above, approximately 670 feet of dual westbound approach lanes at NW 34th Street will be provided. As the maximum westbound queue length approaching NW 34th Street is anticipated to be approximately 500 feet, it appears that adequate storage (and signal operations) will result with this design alternative.

5. CONCLUSIONS:

The City of Gainesville is considering reducing the typical section of NW 8th Avenue from four lanes to two lanes, east of NW 34th Street. A two-lane divided section along NW 8th Avenue will then be provided near the NW 31st Drive intersection. Two design alternatives (A and B) were provided by the City of Gainesville and were analyzed from the standpoint of operations (vehicle delay), and queuing. Alternative A consisted of providing an eastbound left turn lane "drop" at NW 31st Drive for the inside lane along NW 8th Avenue and included a single westbound through lane at the NW 31st Drive intersection. Alternative B consisted of retaining the single westbound through lane, but providing an exclusive (developed) left turn lane maintaining two eastbound through lanes at the NW 31st Drive intersection. Additionally, Alternative B considered widening the NW 31st Drive side street approach to provide exclusive left and right turn lanes versus the existing single lane approach.

The signalized intersection at NW 34th Street and the unsignalized intersection at NW 31st Drive are both currently operating adequately throughout the majority of a typical weekday (Level of Service D or better), however the signalized intersection at NW 34th Street operates near capacity during the evening peak hour.

As no changes are proposed to the signalized intersection of NW 8th Avenue at NW 34th Street, no significant changes to operations or queue lengths are anticipated. Reducing the number of lanes along NW 8th Avenue at NW 31st Drive was found to impact delay to both the side street approach vehicles and eastbound left turning vehicles. Reduction in delay for approaching vehicles along NW 31st Drive occurs when exclusive left and right turn lanes are provided. These impacts are summarized in the following table and detail the average control delays per vehicle and the associated Highway Capacity Manual Levels of Service (HCM LOS) as reported by Synchro Software:

TABLE 10: NW 8th Avenue at NW 31st Drive Operational Impacts

Analysis Period	NW 31st Drive Side Street Approach						NW 8th Avenue Eastbound Left Turns					
	Existing Conditions		Design Alternative A		Design Alternative B		Existing Conditions		Design Alternative A		Design Alternative B	
	Control Delay	HCM LOS	Control Delay	HCM LOS	Control Delay	HCM LOS	Control Delay	HCM LOS	Control Delay	HCM LOS	Control Delay	HCM LOS
AM Peak	18.2"	C	32.0"	D	18.5"	C	1.8"	A	8.7"	A	8.7"	A
Midday	12.0"	B	14.6"	B	13.5"	B	0.8"	A	8.4"	A	8.5"	A
Afternoon 1	13.8"	B	18.6"	C	14.9"	B	1.5"	A	8.6"	A	8.6"	A
Afternoon 2	19.8"	C	52.8"	F	20.5"	C	2.8"	A	9.3"	A	9.3"	A
PM Peak	17.7"	C	41.7"	E	22.8"	C	2.7"	A	10.3"	B	10.4"	B

APPENDIX

Appendix A = Turning Movement Count Information
(Provided by City of Gainesville)

Appendix B = Signal Timing Information
(Provided by City of Gainesville)

Appendix C = Synchro Software Output
(Existing Conditions)

Appendix D = Synchro Software Output
(Alternative A Conditions)

Appendix E = Synchro Software Output
(Alternative B Conditions)

Appendix A
Turning Movement Count Information
(Provided by City of Gainesville)

Study Name: NW 8th Ave @ 34th St
Start Date: 09/27/2011
Start Time: 7:00 AM
Site Code:

ALL TRAFFIC GROUPS

	Southbound Street Southbound				Westbound Street Westbound				Northbound Street Northbound				Eastbound Street Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
7:00 AM	15	70	3	0	5	55	15	0	17	48	18	0	7	74	5	0
7:15 AM	22	95	4	0	4	64	22	0	23	52	27	0	10	108	12	0
7:30 AM	18	95	7	0	6	92	28	0	29	82	30	0	10	101	16	0
7:45 AM	13	130	10	0	6	96	39	0	32	88	14	0	15	109	19	0
8:00 AM	14	96	4	0	6	98	42	0	21	78	6	0	14	132	16	0
8:15 AM	17	113	7	0	6	85	34	0	26	93	8	0	10	107	25	0
8:30 AM	17	104	8	0	7	88	35	0	26	84	6	0	8	94	15	0
8:45 AM	16	90	17	0	10	96	40	0	23	79	8	0	17	122	23	0
9:00 AM	18	120	6	0	8	93	25	0	22	94	9	0	16	93	13	0
9:15 AM	10	127	6	0	4	68	17	0	23	88	12	0	10	94	9	0
9:30 AM	15	109	11	0	7	71	25	0	14	86	12	0	17	81	13	0
9:45 AM	12	118	10	0	6	68	21	0	21	87	5	0	9	97	11	0
10:00 AM	15	107	11	0	7	66	22	0	22	79	6	0	14	75	16	0
10:15 AM	11	79	8	0	5	66	20	0	29	85	9	0	18	72	13	0
10:30 AM	16	98	10	0	11	60	26	0	22	89	16	0	13	82	21	0
10:45 AM	17	110	12	0	6	63	36	0	23	89	8	0	15	80	21	0
11:00 AM	15	125	9	0	9	65	20	0	27	103	9	0	17	73	13	0
11:15 AM	20	124	9	0	11	58	21	0	24	86	11	0	12	81	15	0
11:30 AM	13	138	7	0	10	85	38	0	28	79	12	0	16	82	15	0
11:45 AM	15	120	8	0	9	80	24	0	25	112	13	0	12	87	15	0
12:00 PM	16	120	6	0	14	82	36	0	16	115	6	0	20	74	19	0
12:15 PM	11	113	9	0	9	83	19	0	23	114	5	0	12	75	20	0
12:30 PM	19	104	8	0	7	63	23	0	25	113	14	0	15	69	15	0
12:45 PM	23	113	5	0	7	79	35	0	23	112	17	0	13	80	13	0
1:00 PM	28	116	9	0	7	65	31	0	28	108	21	0	20	83	27	0
1:15 PM	35	110	13	0	7	65	34	0	20	121	15	0	18	94	13	0
1:30 PM	24	95	7	0	13	65	27	1	31	106	14	0	11	77	13	0
1:45 PM	14	89	8	0	12	87	28	0	34	97	25	0	13	83	18	0
2:00 PM	11	101	5	0	7	79	31	0	30	88	17	0	14	98	26	0
2:15 PM	16	118	8	0	8	87	28	0	25	92	9	0	13	93	12	0
2:30 PM	17	104	9	0	13	103	24	0	26	122	5	0	12	101	19	0
2:45 PM	15	109	8	0	12	95	27	0	19	122	9	0	16	88	18	0
3:00 PM	24	116	10	0	10	102	36	0	25	108	15	0	8	85	19	0
3:15 PM	15	104	5	0	9	78	22	0	27	117	10	0	8	96	12	0
3:30 PM	18	99	13	0	7	125	45	0	36	84	26	0	12	96	19	0
3:45 PM	13	125	13	0	7	116	43	0	42	93	10	0	8	116	24	0
4:00 PM	19	106	9	0	12	120	22	0	43	118	24	0	10	107	23	0
4:15 PM	13	112	8	0	19	95	36	0	37	146	14	0	13	99	20	0
4:30 PM	24	120	10	0	12	131	44	0	32	158	25	0	16	107	26	0
4:45 PM	23	122	5	0	6	136	38	0	32	145	24	0	16	107	31	0
5:00 PM	11	133	17	0	13	150	46	0	34	130	24	0	11	155	35	0
5:15 PM	26	148	9	0	22	222	69	0	28	159	17	0	26	178	51	0
5:30 PM	31	127	17	0	18	154	45	0	34	154	16	0	12	104	17	0
5:45 PM	25	137	16	0	16	131	40	0	27	145	19	0	13	100	32	0
TOTAL					**410**	**4,030**	**1,379**	**1**					**590**	**4,209**	**828**	**0**

7:00 AM	20	65	4	0	5	46	15	0	19	39	13	0	4	66	12	0
7:15 AM	17	97	3	0	1	59	14	0	25	77	30	0	8	101	7	0
7:30 AM	16	100	4	0	7	81	36	0	27	61	30	0	8	105	16	0
7:45 AM	11	90	7	0	6	113	42	0	30	90	15	0	24	135	11	0
8:00 AM	21	114	7	0	6	95	36	0	24	86	11	0	21	111	15	0
8:15 AM	9	122	6	0	6	78	29	0	24	100	8	0	11	123	25	0
8:30 AM	17	109	7	0	7	84	40	0	25	84	12	0	14	95	16	0
8:45 AM	17	118	6	0	10	90	39	0	23	99	7	0	12	100	13	0
9:00 AM	7	80	6	0	9	73	39	0	24	81	4	0	15	77	27	0
9:15 AM	19	144	6	0	5	63	23	0	24	87	7	0	11	72	10	0
9:30 AM	13	130	8	0	4	78	33	0	14	74	10	0	18	86	18	0
9:45 AM	14	90	4	0	6	60	24	0	27	107	11	0	10	92	8	0
10:00 AM	17	99	11	0	8	68	21	0	20	80	6	0	13	77	18	0
10:15 AM	8	108	13	0	6	65	21	0	26	89	18	0	8	86	12	0
10:30 AM	17	103	11	0	7	75	21	0	21	102	16	0	13	79	18	0
10:45 AM	16	113	8	0	6	77	19	0	23	102	7	0	13	80	22	0
11:00 AM	8	106	8	0	6	60	21	0	19	112	8	0	12	73	12	0
11:15 AM	21	108	6	0	7	61	31	0	21	104	8	0	16	86	21	0
11:30 AM	15	119	11	0	9	71	25	0	24	109	9	0	12	92	12	0
11:45 AM	13	100	11	0	7	74	26	0	22	97	19	0	16	98	24	0
12:00 PM	23	124	6	0	11	82	39	0	33	125	13	0	14	92	25	0
12:15 PM	19	144	9	0	8	58	21	0	20	104	9	0	25	103	23	0
12:30 PM	21	128	6	0	24	86	29	0	32	105	14	0	23	92	27	0
12:45 PM	27	103	8	0	8	77	38	0	35	112	10	0	23	85	16	0
1:00 PM	29	100	6	0	13	89	44	0	35	123	15	0	11	80	18	0
1:15 PM	27	104	8	0	9	82	33	0	24	94	16	0	7	81	24	0
1:30 PM	27	114	4	0	12	67	23	0	31	109	15	0	10	93	15	0
1:45 PM	17	96	14	0	7	87	26	0	35	88	17	0	13	99	18	0
2:00 PM	18	110	9	0	11	101	32	0	33	86	14	0	21	100	22	0
2:15 PM	15	148	11	0	10	78	28	0	24	117	9	0	18	88	15	0
2:30 PM	32	114	11	0	7	84	33	0	21	109	10	0	14	90	23	0
2:45 PM	19	114	7	0	6	99	37	0	32	111	16	0	14	122	16	0
3:00 PM	21	126	12	0	18	94	40	0	27	117	15	0	11	116	23	0
3:15 PM	15	103	12	0	14	90	29	0	32	97	17	0	15	124	29	0
3:30 PM	22	104	11	0	10	107	45	0	34	102	11	0	14	107	23	0
3:45 PM	16	108	13	0	21	138	46	0	43	89	13	0	10	120	30	0
4:00 PM	30	128	15	0	6	103	35	0	50	116	10	0	8	123	17	0
4:15 PM	15	122	10	0	13	123	42	0	33	137	18	0	9	111	23	0
4:30 PM	25	130	6	0	15	141	47	0	29	144	12	0	20	103	24	0
4:45 PM	32	139	7	0	22	116	33	0	45	166	27	0	12	99	26	0
5:00 PM	24	146	14	0	18	152	43	0	33	137	11	0	20	147	29	0
5:15 PM	22	141	22	0	37	186	82	0	35	149	25	0	21	176	47	0
5:30 PM	21	146	19	0	15	126	49	0	28	145	18	0	19	111	25	0
5:45 PM	21	115	9	0	12	132	47	0	37	150	22	0	15	92	27	0
TOTAL					**455**	**3,969**	**1,476**	**0**					**626**	**4,388**	**882**	**0**

AVERAGE	Southbound Street Southbound				Westbound Street Westbound				Northbound Street Northbound				Eastbound Street Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
7:00 AM	17.5	67.5	3.5	0	5	50.5	15	0	18	43.5	15.5	0	5.5	70	8.5	0
7:15 AM	19.5	96	3.5	0	2.5	61.5	18	0	24	64.5	28.5	0	9	104.5	9.5	0
7:30 AM	17	97.5	5.5	0	6.5	86.5	32	0	28	71.5	30	0	9	103	16	0
7:45 AM	12	110	8.5	0	6	104.5	40.5	0	31	89	14.5	0	19.5	122	15	0
8:00 AM	17.5	105	5.5	0	6	96.5	39	0	22.5	82	8.5	0	17.5	121.5	15.5	0
8:15 AM	13	117.5	6.5	0	6	81.5	31.5	0	25	96.5	8	0	10.5	115	25	0
8:30 AM	17	106.5	7.5	0	7	86	37.5	0	25.5	84	9	0	11	94.5	15.5	0
8:45 AM	16.5	104	11.5	0	10	93	39.5	0	23	89	7.5	0	14.5	111	18	0
9:00 AM	12.5	100	6	0	8.5	83	32	0	23	87.5	6.5	0	15.5	85	20	0
9:15 AM	14.5	135.5	6	0	4.5	65.5	20	0	23.5	87.5	9.5	0	10.5	83	9.5	0
9:30 AM	14	119.5	9.5	0	5.5	74.5	29	0	14	80	11	0	17.5	83.5	15.5	0
9:45 AM	13	104	7	0	6	64	22.5	0	24	97	8	0	9.5	94.5	9.5	0
10:00 AM	16	103	11	0	7.5	67	21.5	0	21	79.5	6	0	13.5	76	17	0
10:15 AM	9.5	93.5	10.5	0	5.5	65.5	20.5	0	27.5	87	13.5	0	13	79	12.5	0
10:30 AM	16.5	100.5	10.5	0	9	67.5	23.5	0	21.5	95.5	16	0	13	80.5	19.5	0
10:45 AM	16.5	111.5	10	0	6	70	27.5	0	23	95.5	7.5	0	14	80	21.5	0
11:00 AM	11.5	115.5	8.5	0	7.5	62.5	20.5	0	23	107.5	8.5	0	14.5	73	12.5	0
11:15 AM	20.5	116	7.5	0	9	59.5	26	0	22.5	95	9.5	0	14	83.5	18	0
11:30 AM	14	128.5	9	0	9.5	78	31.5	0	26	94	10.5	0	14	87	13.5	0
11:45 AM	14	110	9.5	0	8	77	25	0	23.5	104.5	16	0	14	92.5	19.5	0
12:00 PM	19.5	122	6	0	12.5	82	37.5	0	24.5	120	9.5	0	17	83	22	0
12:15 PM	15	128.5	9	0	8.5	70.5	20	0	21.5	109	7	0	18.5	89	21.5	0
12:30 PM	20	116	7	0	15.5	74.5	26	0	28.5	109	14	0	19	80.5	21	0
12:45 PM	25	108	6.5	0	7.5	78	36.5	0	29	112	13.5	0	18	82.5	14.5	0
1:00 PM	28.5	108	7.5	0	10	77	37.5	0	31.5	115.5	18	0	15.5	81.5	22.5	0
1:15 PM	31	107	10.5	0	8	73.5	33.5	0	22	107.5	15.5	0	12.5	87.5	18.5	0
1:30 PM	25.5	104.5	5.5	0	12.5	66	25	0.5	31	107.5	14.5	0	10.5	85	14	0
1:45 PM	15.5	92.5	11	0	9.5	87	27	0	34.5	92.5	21	0	13	91	18	0
2:00 PM	14.5	105.5	7	0	9	90	31.5	0	31.5	87	15.5	0	17.5	99	24	0
2:15 PM	15.5	133	9.5	0	9	82.5	28	0	24.5	104.5	9	0	15.5	90.5	13.5	0
2:30 PM	24.5	109	10	0	10	93.5	28.5	0	23.5	115.5	7.5	0	13	95.5	21	0
2:45 PM	17	111.5	7.5	0	9	97	32	0	25.5	116.5	12.5	0	15	105	17	0
3:00 PM	22.5	121	11	0	14	98	38	0	26	112.5	15	0	9.5	100.5	21	0
3:15 PM	15	103.5	8.5	0	11.5	84	25.5	0	29.5	107	13.5	0	11.5	110	20.5	0
3:30 PM	20	101.5	12	0	8.5	116	45	0	35	93	18.5	0	13	101.5	21	0
3:45 PM	14.5	116.5	13	0	14	127	44.5	0	42.5	91	11.5	0	9	118	27	0
4:00 PM	24.5	117	12	0	9	111.5	28.5	0	46.5	117	17	0	9	115	20	0
4:15 PM	14	117	9	0	16	109	39	0	35	141.5	16	0	11	105	21.5	0
4:30 PM	24.5	125	8	0	13.5	136	45.5	0	30.5	151	18.5	0	18	105	25	0
4:45 PM	27.5	130.5	6	0	14	126	35.5	0	38.5	155.5	25.5	0	14	103	28.5	0
5:00 PM	17.5	139.5	15.5	0	15.5	151	44.5	0	33.5	133.5	17.5	0	15.5	151	32	0
5:15 PM	24	144.5	15.5	0	29.5	204	75.5	0	31.5	154	21	0	23.5	177	49	0
5:30 PM	26	136.5	18	0	16.5	140	47	0	31	149.5	17	0	15.5	107.5	21	0
5:45 PM	23	126	12.5	0	14	131.5	43.5	0	32	147.5	20.5	0	14	96	29.5	0
TOTAL					**433**	**4,000**	**1,428**	**1**					**608**	**4,299**	**855**	**0**

Study Name: NW 8th Ave @ 34th St
Start Date: 09/27/2011
Start Time: 7:00 AM
Site Code:

HEAVY TRUCKS

	Southbound Street Southbound				Westbound Street Westbound				Northbound Street Northbound				Eastbound Street Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
7:00 AM	0	0	0	0	0	0	1	0	0	5	0	0	0	0	1	0
7:15 AM	1	1	0	0	0	2	0	0	0	2	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
7:45 AM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	1	0	0	0	2	0	0	1	0	0	0
8:15 AM	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	3	0	0	0	1	0	0	0	2	0	0
9:00 AM	0	1	0	0	0	1	1	0	0	3	0	0	0	3	0	0
9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
9:45 AM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:00 AM	0	1	0	0	0	1	1	0	0	2	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
10:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
11:00 AM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
12:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0
1:15 PM	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0
1:30 PM	3	3	2	0	2	0	0	0	0	1	0	0	0	0	0	0
1:45 PM	2	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	1	0	1	0	1	0	0	0	0	1	0	0	0	1	1	0
2:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	0
2:45 PM	0	4	0	0	0	1	0	0	1	0	0	0	0	0	0	0
3:00 PM	1	0	0	0	1	0	0	0	1	2	0	0	0	1	0	0
3:15 PM	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0
3:30 PM	0	0	1	0	0	0	2	0	1	1	0	0	0	1	0	0
3:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL					**10**	**15**	**8**	**0**					**1**	**21**	**2**	**0**
7:00 AM	0	0	0	0	0	0	1	0	0	4	0	0	0	0	1	0
7:15 AM	1	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
8:15 AM	0	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	2	0	0	1	1	0	0	0	0	0	0
9:00 AM	0	1	0	0	0	0	1	0	0	3	0	0	0	3	0	0
9:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
11:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
12:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
1:15 PM	0	1	0	0	3	2	0	0	0	2	0	0	0	1	0	0
1:30 PM	2	1	2	0	3	2	0	0	0	0	0	0	0	0	0	0
1:45 PM	2	2	0	0	1	0	0	0	0	1	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
2:15 PM	1	0	2	0	0	0	0	0	0	2	0	0	0	2	1	0
2:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
2:45 PM	0	1	0	0	0	0	0	0	1	1	0	0	0	1	0	0
3:00 PM	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
3:15 PM	0	0	0	0	1	1	0	0	1	1	0	0	0	1	0	0
3:30 PM	0	0	1	0	0	0	1	0	0	1	0	0	0	1	0	0
3:45 PM	0	0	0	0	0	1	2	0	0	0	0	0	0	3	0	0
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL					**9**	**13**	**8**	**0**					**1**	**17**	**3**	**0**

Study Name: NW 8th Ave @ 34th St
Start Date: 09/27/2011
Start Time: 7:00 AM
Site Code:

MEDIUM TRUCKS

	Southbound Street Southbound				Westbound Street Westbound				Northbound Street Northbound				Eastbound Street Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
7:00 AM	1	3	0	0	0	1	0	0	0	3	0	0	0	0	1	0
7:15 AM	0	2	0	0	0	0	0	0	0	3	0	0	0	1	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	1	0	0	3	1	0	0	0	0	0	0
8:00 AM	3	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0
8:15 AM	1	2	0	0	0	0	0	0	0	2	0	0	0	1	0	0
8:30 AM	0	2	0	0	0	1	0	0	2	3	0	0	0	0	0	0
8:45 AM	0	2	0	0	0	0	0	0	1	1	0	0	0	1	1	0
9:00 AM	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
9:15 AM	0	2	0	0	0	1	1	0	0	4	0	0	0	0	0	0
9:30 AM	2	7	0	0	0	0	0	0	0	3	0	0	0	1	0	0
9:45 AM	1	6	0	0	0	0	1	0	1	4	0	0	1	0	0	0
10:00 AM	0	2	0	0	0	2	0	0	0	3	1	0	1	1	0	0
10:15 AM	1	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0
10:30 AM	1	2	0	0	0	0	0	0	1	5	0	0	0	0	0	0
10:45 AM	1	3	0	0	0	0	0	0	0	5	0	0	0	1	0	0
11:00 AM	2	0	1	0	0	0	0	0	0	2	0	0	0	1	0	0
11:15 AM	0	1	0	0	0	0	1	0	0	4	1	0	0	1	1	0
11:30 AM	1	1	0	0	0	0	0	0	0	1	0	0	0	0	2	0
11:45 AM	1	2	0	0	0	2	0	0	0	3	0	0	0	0	0	0
12:00 PM	1	4	0	0	0	0	1	0	2	3	0	0	0	2	0	0
12:15 PM	0	4	0	0	0	1	1	0	1	5	1	0	0	2	1	0
12:30 PM	0	2	0	0	0	0	0	0	0	9	0	0	0	1	0	0
12:45 PM	0	2	0	0	0	1	0	0	0	1	0	0	0	1	0	0
1:00 PM	0	3	1	0	0	1	0	0	0	4	0	0	0	1	0	0
1:15 PM	0	4	0	0	0	1	1	0	0	5	0	0	1	0	0	0
1:30 PM	1	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0
1:45 PM	0	4	0	0	0	0	2	0	0	1	0	0	0	2	0	0
2:00 PM	0	1	0	0	0	0	0	0	2	2	0	0	0	1	0	0
2:15 PM	0	4	0	0	0	2	0	0	1	2	0	0	1	0	0	0
2:30 PM	0	1	0	0	1	0	0	0	0	1	0	0	0	1	0	0
2:45 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	1	1	0
3:00 PM	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	2	0	1	1	0	0	0	0	0	0
3:30 PM	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0
3:45 PM	0	7	0	0	0	0	2	0	0	5	0	0	0	0	0	0
4:00 PM	0	1	0	0	0	1	1	0	0	1	0	0	0	1	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0
4:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0
4:45 PM	1	2	0	0	0	0	0	0	1	3	0	0	0	2	0	0
5:00 PM	0	1	0	0	0	1	0	0	0	2	0	0	0	0	0	0
5:15 PM	0	1	1	0	0	0	1	0	0	1	0	0	2	1	0	0
5:30 PM	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0

5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
TOTAL					**1**	**22**	**16**	**0**					**6**	**27**	**8**	**0**
7:00 AM	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0
7:45 AM	1	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0
8:00 AM	0	1	1	0	0	0	1	0	2	2	0	0	0	1	0	0
8:15 AM	0	3	0	0	0	0	0	0	0	4	0	0	0	1	0	0
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8:45 AM	0	2	0	0	0	3	0	0	0	1	1	0	0	1	0	0
9:00 AM	0	5	0	0	1	0	0	0	0	2	0	0	0	1	0	0
9:15 AM	1	4	0	0	0	1	1	0	0	4	0	0	1	2	0	0
9:30 AM	1	8	0	0	0	1	1	0	0	1	0	0	0	0	0	0
9:45 AM	0	5	0	0	1	0	0	0	0	3	0	0	0	1	0	0
10:00 AM	0	2	0	0	0	0	0	0	0	3	0	0	0	1	0	0
10:15 AM	0	2	0	0	0	2	2	0	0	1	0	0	0	1	1	0
10:30 AM	0	3	0	0	0	0	0	0	0	2	0	0	0	0	1	0
10:45 AM	0	1	0	0	2	0	0	0	0	2	0	0	0	0	1	0
11:00 AM	0	2	1	0	0	0	0	0	0	2	0	0	0	1	0	0
11:15 AM	0	9	1	0	0	1	1	0	0	3	0	0	0	1	0	0
11:30 AM	0	0	0	0	1	1	0	0	2	5	0	0	0	0	2	0
11:45 AM	0	2	0	0	0	0	1	0	0	2	0	0	0	0	0	0
12:00 PM	0	4	0	0	1	1	0	0	1	3	0	0	0	0	0	0
12:15 PM	0	0	0	0	1	1	0	0	0	5	0	0	0	0	1	0
12:30 PM	1	3	0	0	0	0	1	0	0	1	1	0	0	0	0	0
12:45 PM	1	2	0	0	0	2	0	0	0	1	0	0	0	1	0	0
1:00 PM	1	2	1	0	0	0	0	0	0	2	1	0	0	1	0	0
1:15 PM	0	1	0	0	0	1	0	0	0	2	0	0	0	0	1	0
1:30 PM	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0
1:45 PM	0	3	0	0	0	0	3	0	1	3	0	0	0	0	0	0
2:00 PM	0	1	1	0	0	1	0	0	0	2	0	0	0	1	0	0
2:15 PM	2	3	0	0	0	0	0	0	0	2	0	0	0	0	1	0
2:30 PM	0	3	1	0	1	0	1	0	0	5	0	0	0	0	0	0
2:45 PM	0	6	0	0	0	0	0	0	0	2	0	0	0	0	0	0
3:00 PM	0	1	1	0	0	0	1	0	0	1	0	0	0	2	0	0
3:15 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	5	0	0	0	1	0	0	2	1	0	0	0	0	0	0
3:45 PM	0	1	0	0	1	1	0	0	0	0	0	0	0	0	1	0
4:00 PM	0	2	0	0	0	0	0	0	0	2	0	0	0	1	0	0
4:15 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	2	0	0
4:30 PM	1	2	0	0	0	0	3	0	0	2	1	0	0	0	0	0
4:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	2	0	0
5:00 PM	0	1	0	0	0	1	1	0	1	1	0	0	0	0	0	0
5:15 PM	0	5	0	0	1	1	1	0	0	0	0	0	0	1	0	0
5:30 PM	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
TOTAL					**10**	**20**	**20**	**0**					**1**	**23**	**9**	**0**

Study Name: NW 8th Ave @ 31st Dr
Start Date: 09/27/2011
Start Time: 7:00 AM
Site Code:

ALL TRAFFIC GROUPS

	Southbound Street Southbound			Westbound Street Westbound			Eastbound Street Eastbound		
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn
7:00 AM	11	9	0	3	69	0	87	2	0
7:15 AM	11	6	0	4	86	0	131	3	0
7:30 AM	12	14	0	6	122	0	131	6	0
7:45 AM	13	14	0	6	129	0	173	3	0
8:00 AM	9	9	0	5	128	0	116	7	0
8:15 AM	10	7	0	7	105	0	130	13	0
8:30 AM	20	13	0	12	116	0	122	8	0
8:45 AM	22	25	0	8	122	0	136	8	0
9:00 AM	16	13	0	7	105	0	116	9	0
9:15 AM	5	4	0	3	86	0	122	4	1
9:30 AM	4	2	0	5	95	0	109	3	0
9:45 AM	4	7	0	1	96	0	119	2	0
10:00 AM	6	2	0	2	100	0	100	4	0
10:15 AM	4	3	0	0	80	0	103	4	1
10:30 AM	2	2	0	2	91	0	107	2	0
10:45 AM	4	1	0	3	102	0	109	6	0
11:00 AM	2	3	0	2	100	0	106	3	0
11:15 AM	2	3	0	3	83	0	111	1	0
11:30 AM	7	1	0	0	122	0	106	5	0
11:45 AM	3	0	0	4	112	0	111	4	0
12:00 PM	4	5	1	4	137	1	104	2	0
12:15 PM	3	3	0	3	92	0	93	2	0
12:30 PM	3	2	0	0	87	0	107	5	0
12:45 PM	4	3	0	1	112	0	101	2	0
1:00 PM	6	0	0	2	99	0	113	3	0
1:15 PM	4	1	0	6	112	0	116	4	0
1:30 PM	2	8	0	1	109	0	111	7	0
1:45 PM	10	3	0	2	117	0	122	10	0
2:00 PM	5	4	0	4	111	0	116	7	0
2:15 PM	4	5	0	3	115	0	122	9	0
2:30 PM	8	2	0	4	128	1	129	5	0
2:45 PM	3	0	0	6	139	0	113	2	1
3:00 PM	4	4	2	8	128	2	108	5	0
3:15 PM	10	5	0	19	104	0	120	13	0
3:30 PM	38	21	0	10	167	0	127	16	0
3:45 PM	12	12	0	12	146	0	165	11	0
4:00 PM	11	2	0	10	145	0	149	9	0
4:15 PM	11	6	0	8	134	0	133	5	0
4:30 PM	7	5	0	5	185	0	138	6	0
4:45 PM	7	0	0	11	184	0	155	6	0
5:00 PM	7	1	0	11	197	0	181	6	1
5:15 PM	11	3	0	22	222	0	168	13	0
5:30 PM	12	8	0	11	188	0	144	14	0
5:45 PM	4	1	0	5	153	0	115	12	0
TOTAL				**251**	**5,360**	**4**	**5,395**	**271**	**4**

7:00 AM	8	5	0	1	55	0	81	4	0
7:15 AM	6	9	0	4	86	0	130	2	0
7:30 AM	15	6	0	3	102	0	137	3	0
7:45 AM	12	16	0	12	141	0	150	2	0
8:00 AM	12	10	0	3	125	0	140	5	0
8:15 AM	9	10	0	7	103	0	155	6	0
8:30 AM	14	12	0	12	115	0	105	10	0
8:45 AM	19	17	0	14	134	0	124	11	0
9:00 AM	18	12	0	10	90	0	97	7	0
9:15 AM	7	7	0	3	83	0	104	5	0
9:30 AM	5	1	0	1	106	0	108	2	0
9:45 AM	5	1	0	1	88	0	117	3	0
10:00 AM	4	0	0	3	89	0	112	2	0
10:15 AM	4	3	0	2	84	0	119	3	0
10:30 AM	3	1	0	4	109	0	102	7	0
10:45 AM	5	3	0	1	92	0	95	6	0
11:00 AM	1	2	0	3	85	0	100	4	0
11:15 AM	6	3	0	0	93	0	110	2	0
11:30 AM	5	3	0	4	98	0	128	3	0
11:45 AM	5	0	0	4	107	0	120	5	0
12:00 PM	5	1	0	6	122	0	121	4	0
12:15 PM	5	2	0	5	89	0	116	3	0
12:30 PM	3	4	0	0	136	0	116	4	0
12:45 PM	6	4	0	1	118	0	116	5	0
1:00 PM	2	3	0	2	134	0	120	5	0
1:15 PM	3	4	0	3	114	0	96	4	0
1:30 PM	6	2	0	3	107	0	127	7	0
1:45 PM	8	6	0	1	121	0	150	2	0
2:00 PM	4	2	0	5	140	0	120	6	0
2:15 PM	7	8	0	1	99	0	120	9	0
2:30 PM	8	1	0	1	122	0	118	2	0
2:45 PM	8	2	0	3	127	0	160	6	0
3:00 PM	8	2	0	16	139	0	153	16	0
3:15 PM	15	8	0	20	129	0	157	22	0
3:30 PM	35	22	0	12	142	0	152	16	0
3:45 PM	23	11	0	12	153	0	159	14	0
4:00 PM	19	5	0	7	164	0	177	21	1
4:15 PM	17	5	0	9	155	0	126	8	0
4:30 PM	5	5	0	5	181	0	125	13	0
4:45 PM	10	4	0	10	186	0	151	13	0
5:00 PM	14	4	0	17	208	0	158	18	0
5:15 PM	15	6	0	22	209	0	180	14	0
5:30 PM	14	4	0	11	174	0	147	15	0
5:45 PM	12	9	0	15	166	0	120	8	0
TOTAL				**279**	**5,420**	**0**	**5,619**	**327**	**1**

AVERAGE

	Southbound Street Southbound			Westbound Street Westbound			Eastbound Street Eastbound		
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn
7:00 AM	9.5	7	0	2	62	0	84	3	0
7:15 AM	8.5	7.5	0	4	86	0	130.5	2.5	0
7:30 AM	13.5	10	0	4.5	112	0	134	4.5	0
7:45 AM	12.5	15	0	9	135	0	161.5	2.5	0
8:00 AM	10.5	9.5	0	4	126.5	0	128	6	0
8:15 AM	9.5	8.5	0	7	104	0	142.5	9.5	0
8:30 AM	17	12.5	0	12	115.5	0	113.5	9	0
8:45 AM	20.5	21	0	11	128	0	130	9.5	0
9:00 AM	17	12.5	0	8.5	97.5	0	106.5	8	0
9:15 AM	6	5.5	0	3	84.5	0	113	4.5	0.5
9:30 AM	4.5	1.5	0	3	100.5	0	108.5	2.5	0
9:45 AM	4.5	4	0	1	92	0	118	2.5	0
10:00 AM	5	1	0	2.5	94.5	0	106	3	0
10:15 AM	4	3	0	1	82	0	111	3.5	0.5
10:30 AM	2.5	1.5	0	3	100	0	104.5	4.5	0
10:45 AM	4.5	2	0	2	97	0	102	6	0
11:00 AM	1.5	2.5	0	2.5	92.5	0	103	3.5	0
11:15 AM	4	3	0	1.5	88	0	110.5	1.5	0
11:30 AM	6	2	0	2	110	0	117	4	0
11:45 AM	4	0	0	4	109.5	0	115.5	4.5	0
12:00 PM	4.5	3	0.5	5	129.5	0.5	112.5	3	0
12:15 PM	4	2.5	0	4	90.5	0	104.5	2.5	0
12:30 PM	3	3	0	0	111.5	0	111.5	4.5	0
12:45 PM	5	3.5	0	1	115	0	108.5	3.5	0
1:00 PM	4	1.5	0	2	116.5	0	116.5	4	0
1:15 PM	3.5	2.5	0	4.5	113	0	106	4	0
1:30 PM	4	5	0	2	108	0	119	7	0
1:45 PM	9	4.5	0	1.5	119	0	136	6	0
2:00 PM	4.5	3	0	4.5	125.5	0	118	6.5	0
2:15 PM	5.5	6.5	0	2	107	0	121	9	0
2:30 PM	8	1.5	0	2.5	125	0.5	123.5	3.5	0
2:45 PM	5.5	1	0	4.5	133	0	136.5	4	0.5
3:00 PM	6	3	1	12	133.5	1	130.5	10.5	0
3:15 PM	12.5	6.5	0	19.5	116.5	0	138.5	17.5	0
3:30 PM	36.5	21.5	0	11	154.5	0	139.5	16	0
3:45 PM	17.5	11.5	0	12	149.5	0	162	12.5	0
4:00 PM	15	3.5	0	8.5	154.5	0	163	15	0.5
4:15 PM	14	5.5	0	8.5	144.5	0	129.5	6.5	0
4:30 PM	6	5	0	5	183	0	131.5	9.5	0
4:45 PM	8.5	2	0	10.5	185	0	153	9.5	0
5:00 PM	10.5	2.5	0	14	202.5	0	169.5	12	0.5
5:15 PM	13	4.5	0	22	215.5	0	174	13.5	0
5:30 PM	13	6	0	11	181	0	145.5	14.5	0
5:45 PM	8	5	0	10	159.5	0	117.5	10	0
TOTAL				**265**	**5,390**	**2**	**5,507**	**299**	**3**

Study Name: NW 8th Ave @ 31st Dr
Start Date: 09/27/2011
Start Time: 7:00 AM
Site Code:

HEAVY TRUCKS

	Southbound Street Southbound			Westbound Street Westbound			Eastbound Street Eastbound		
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn
7:00 AM	1	1	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	2	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	0	0
7:45 AM	0	0	0	0	1	0	0	0	0
8:00 AM	1	0	0	0	1	0	0	0	0
8:15 AM	0	0	0	0	0	0	1	0	0
8:30 AM	0	2	0	0	0	0	2	0	0
8:45 AM	3	10	0	2	1	0	2	0	0
9:00 AM	0	3	0	0	0	0	4	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	1	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	2	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	1	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	1	0	0
12:15 PM	0	0	0	0	0	0	1	0	0
12:30 PM	0	0	0	0	0	0	2	0	0
12:45 PM	0	0	0	0	0	0	0	0	0
1:00 PM	0	0	0	0	2	0	0	0	0
1:15 PM	0	0	0	0	5	0	0	0	0
1:30 PM	0	0	0	0	2	0	0	0	0
1:45 PM	0	0	0	0	1	0	0	0	0
2:00 PM	0	0	0	0	1	0	1	0	0
2:15 PM	0	1	0	0	1	0	2	0	0
2:30 PM	0	0	0	0	0	0	3	0	0
2:45 PM	0	0	0	0	1	0	1	0	0
3:00 PM	0	0	0	0	2	0	2	0	0
3:15 PM	0	0	0	2	0	0	1	0	0
3:30 PM	1	4	0	0	1	0	1	2	0
3:45 PM	0	0	0	0	2	0	0	1	0
4:00 PM	0	0	0	0	0	0	1	0	0
4:15 PM	0	0	0	0	0	0	3	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL				**4**	**25**	**0**	**30**	**4**	**0**

7:00 AM	1	1	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	1	0	0	0	1	0	2	0	0
8:15 AM	0	0	0	0	1	0	1	0	0
8:30 AM	0	4	0	0	0	0	1	0	0
8:45 AM	2	6	0	2	0	0	3	0	0
9:00 AM	0	4	0	0	1	0	2	0	0
9:15 AM	0	1	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	1	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	1	0	0	0	0
1:00 PM	0	0	0	0	4	0	1	0	0
1:15 PM	0	0	0	0	2	0	0	0	0
1:30 PM	0	0	0	0	5	0	2	0	0
1:45 PM	0	0	0	0	1	0	0	0	0
2:00 PM	1	0	0	0	0	0	0	0	0
2:15 PM	0	1	0	0	0	0	4	0	0
2:30 PM	0	0	0	0	1	0	1	0	0
2:45 PM	0	0	0	0	0	0	2	0	0
3:00 PM	0	0	0	0	2	0	3	0	0
3:15 PM	0	0	0	1	0	0	1	0	0
3:30 PM	1	3	0	0	2	0	1	1	0
3:45 PM	0	1	0	0	2	0	2	1	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	1	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	1	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL				**3**	**25**	**0**	**29**	**2**	**0**

Study Name: NW 8th Ave @ 31st Dr
Start Date: 09/27/2011
Start Time: 7:00 AM
Site Code:

MEDIUM TRUCKS

	Southbound Street Southbound			Westbound Street Westbound			Eastbound Street Eastbound		
Start Time	Right	Left	U-Turn	Right	Thru	U-Turn	Thru	Left	U-Turn
7:00 AM	0	0	0	0	1	0	0	0	0
7:15 AM	0	0	0	0	0	0	1	0	0
7:30 AM	0	0	0	0	0	0	1	0	0
7:45 AM	1	0	0	0	1	0	2	1	0
8:00 AM	0	0	0	0	1	0	1	0	0
8:15 AM	0	0	0	0	0	0	1	0	0
8:30 AM	0	0	0	0	2	0	3	1	0
8:45 AM	0	0	0	0	0	0	1	0	0
9:00 AM	0	0	0	0	1	0	0	0	0
9:15 AM	0	0	0	0	2	0	0	0	0
9:30 AM	0	0	0	2	0	0	1	0	0
9:45 AM	0	0	0	0	2	0	2	0	0
10:00 AM	1	0	0	0	1	0	1	0	0
10:15 AM	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	3	0	0
10:45 AM	0	1	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	1	1	0
11:15 AM	0	0	0	0	2	0	1	0	0
11:30 AM	0	0	0	0	1	0	0	0	0
11:45 AM	0	0	0	0	2	0	0	0	0
12:00 PM	0	1	0	0	1	0	3	0	0
12:15 PM	1	0	0	0	1	0	4	0	0
12:30 PM	0	0	0	0	1	0	2	0	0
12:45 PM	0	0	0	0	0	0	1	0	0
1:00 PM	0	0	0	0	2	0	1	0	0
1:15 PM	0	0	0	0	2	0	2	0	0
1:30 PM	0	1	0	0	0	0	1	0	0
1:45 PM	0	0	0	0	2	0	0	1	0
2:00 PM	0	0	0	0	0	0	4	0	0
2:15 PM	0	0	0	0	2	0	1	0	0
2:30 PM	0	0	0	0	1	0	0	0	0
2:45 PM	0	0	0	0	0	0	1	0	0
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	2	0	0	0	0
3:30 PM	0	0	0	0	3	0	0	0	0
3:45 PM	0	0	0	0	1	0	0	0	0
4:00 PM	1	0	0	0	2	0	0	1	0
4:15 PM	0	0	0	0	1	0	3	0	0
4:30 PM	0	0	0	0	0	0	1	0	0
4:45 PM	0	0	0	0	1	0	3	0	0
5:00 PM	0	0	0	0	0	0	2	0	0
5:15 PM	0	0	0	0	1	0	2	0	0
5:30 PM	1	0	0	1	1	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL				**3**	**40**	**0**	**50**	**5**	**0**

7:00 AM	0	0	0	0	0	0	0	2	0
7:15 AM	0	0	0	1	0	0	1	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	2	0	0
8:15 AM	0	0	0	0	1	0	1	0	0
8:30 AM	0	0	0	0	2	0	1	0	0
8:45 AM	0	0	0	0	3	0	1	0	0
9:00 AM	0	0	0	0	0	0	1	0	0
9:15 AM	0	0	0	0	2	0	3	0	0
9:30 AM	0	0	0	0	2	0	0	0	0
9:45 AM	0	0	0	1	1	0	2	0	0
10:00 AM	0	0	0	1	0	0	1	0	0
10:15 AM	1	1	0	1	3	0	1	0	0
10:30 AM	0	0	0	0	1	0	1	0	0
10:45 AM	0	0	0	0	1	0	0	0	0
11:00 AM	0	0	0	0	0	0	3	0	0
11:15 AM	0	0	0	0	3	0	3	0	0
11:30 AM	0	0	0	0	2	0	2	0	0
11:45 AM	0	0	0	0	2	0	1	0	0
12:00 PM	0	0	0	0	2	0	2	0	0
12:15 PM	0	0	0	0	3	0	1	0	0
12:30 PM	0	0	0	0	1	0	0	0	0
12:45 PM	0	0	0	0	1	0	4	0	0
1:00 PM	0	0	0	0	0	0	0	0	0
1:15 PM	0	1	0	0	1	0	0	0	0
1:30 PM	0	0	0	0	0	0	2	0	0
1:45 PM	0	1	0	0	3	0	1	0	0
2:00 PM	0	0	0	0	1	0	2	0	0
2:15 PM	0	0	0	0	0	0	1	0	0
2:30 PM	0	0	0	0	2	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	1	0	2	0	0
3:15 PM	0	0	0	0	1	0	1	0	0
3:30 PM	0	0	0	0	1	0	2	0	0
3:45 PM	0	0	0	0	1	0	0	0	0
4:00 PM	0	0	0	0	0	0	4	0	0
4:15 PM	0	0	0	0	2	0	4	0	0
4:30 PM	1	0	0	0	1	0	0	0	0
4:45 PM	0	0	0	0	0	0	3	0	0
5:00 PM	0	0	0	0	2	0	1	0	0
5:15 PM	1	0	0	0	2	0	1	0	0
5:30 PM	0	0	0	0	1	0	2	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL				**4**	**49**	**0**	**57**	**2**	**0**

Appendix B
Signal Timing Information
(Provided by City of Gainesville)

City of Gainesville | Timing Sheet | 11/28/2011 8:19:47 AM

Station : 4550 - NW 8th Ave @ 34th St (Standard File)

Phase	1 (NL)	2 (ST)	3 (EL)	4 (WT)	5 (SL)	6 (NT)	7 (WL)	8 (ET)	9	10	11	12	13	14	15	16
Walk		7		7		7		7			7					
Ped Clearance		20		16		20		16			20					
Min Green	4	15	4	15	4	15	4	15			4					
Passage	2.5	3.5	2.5	3.5	2.5	3.5	2.5	3.5			1					
Max1	15	70	15	45	15	70	15	45			25					
Max2																
Yellow	4	4	4	4	4	4	4	4			3					
Red	1	1	1	1	1	1	1	1								
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Entry				ON				ON								
Auto Exit		ON				ON										
Non Act1																
Non Act2																
Lock Call																
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable		ON				ON										
Guar Passage																
Rest In Walk																
Cond Service																
Add Init Calc																
Bike Clear																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash						
Override Higher						
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	5	5	5	5	5	5
Min Walk						
Ped Clear		20				
Track Green						
Min Dwell	10	10	10	10	10	10
Max Presence	999	999	120	120	120	120
Track R1						
Track R2						
Track R3						
Track R4						
Dwell Ped1						
Exit R1	4	2	4	4	2	2
Exit R2	8	6	8	8	6	6
Exit R3						
Exit R4						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Type	OFF	OFF	OFF	OFF
Platoon Rx				
Cond Lockout				
Coord in Preempt				
Platoon Tx				
Lock				
Begin Mode	SKIP	SKIP	SKIP	SKIP
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Max Lockout				
Ext Dwell				
Ant Arrival				
Max Grn 1				
Max Grn 2				
Max Grn 3				
Max Grn 4				
Max Grn 5				
Max Grn 6				
Max Grn 7				
Max Grn 8				
Max Grn 9				
Max Grn 10				
Max Grn 11				
Max Grn 12				
Max Grn 13				
Max Grn 14				
Max Grn 15				

Prepared By

Date Implemented

Reviewed By	Traffic Engineer

Max Grn 16				
Headway Group				
Queue Jump				
Headway Time				
TX Time				
PP Hold Time				
PP Tx Phase 1				
PP Tx Phase 2				
PP Tx Phase 3				
PP Tx Phase 4				

City of Gainesville Timing Sheet 11/28/2011 8:19:47 AM

Station : 4550 - NW 8th Ave @ 34th St (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		95	254																							
6	45	1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
7	45	95	254																							
9		1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
12		95	254																							
15		3	3	162	73	3	1	12	17		20	76	25	41	20	76	25	41								
18	30	95	254																							
19		1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
21		95	254																							
Day Plan 2											**Easy**															
		95	254																							
6	45	1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
7	45	95	254																							
9		1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
12		95	254																							
16		3	3	162	73	3	1	12	17		20	76	25	41	20	76	25	41								
19		1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
21		95	254																							
Day Plan 3											**Easy**															
		95	254																							
7		1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
11	45	95	254																							
14		1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
20		95	254																							

Station : 4550 - NW 8th Ave @ 34th St (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															
		95	254																							
7		1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
11	45	95	254																							
14		1	1	90	49	1	16	12	17		13	34	15	28	13	34	15	28								
20		95	254																							

Scheduler

	Month												Day of Week							Day of Month									1										2										3		
Plan	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**	**S**	**M**	**T**	**W**	**T**	**F**	**S**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**0**	**1**	**Day Plan**
1																																																			1
2																																																			2
3	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
5																																																			5
6																																																			6
7																																																			7
8																																																			8
9																																																			9
10																																																			10
11	1	1	1	1	1	1	1	1	1	1	1	1		1	1		1			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11
12	1	1	1	1	1	1	1	1	1	1	1	1						1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	12
13	1	1	1	1	1	1	1	1	1	1	1	1				1				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13
14						1								1	1	1	1													1	1	1	1				1	1	1	1				1	1	1	1				14
15						1												1			1																														15
16							1							1	1	1	1				1	1		1				1	1	1	1				1	1															14
17							1											1			1																														15
18						1								1	1	1	1	1					1	1	1																										18
19																																																			19
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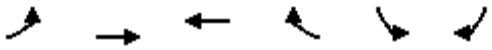
30																																																			31
31																																																			32
32																																																			1

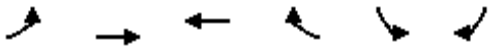
User Comments:

Appendix C
Synchro Software Output
(Existing Conditions)



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	34	514	474	34	52	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.990		0.929	
Flt Protected		0.997			0.977	
Satd. Flow (prot)	0	3529	3504	0	1472	0
Flt Permitted		0.997			0.977	
Satd. Flow (perm)	0	3529	3504	0	1472	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3800		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	25%	10%
Adj. Flow (vph)	38	571	527	38	58	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	609	565	0	122	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	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	

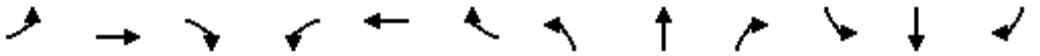
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	34	514	474	34	52	58
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)	38	571	527	38	58	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		964				
pX, platoon unblocked					0.94	
vC, conflicting volume	564				907	282
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	564				767	282
tC, single (s)	4.1				7.3	7.1
tC, 2 stage (s)						
tF (s)	2.2				3.8	3.4
p0 queue free %	96				78	91
cM capacity (veh/h)	1003				265	691

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	228	381	351	213	122
Volume Left	38	0	0	0	58
Volume Right	0	0	0	38	64
cSH	1003	1700	1700	1700	393
Volume to Capacity	0.04	0.22	0.21	0.13	0.31
Queue Length 95th (ft)	3	0	0	0	33
Control Delay (s)	1.8	0.0	0.0	0.0	18.2
Lane LOS	A				C
Approach Delay (s)	0.7		0.0		18.2
Approach LOS					C

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

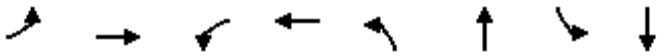


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	442	54	148	357	29	33	352	96	31	433	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.989			0.968			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3483	0	1770	3500	0	1770	1803	0	1770	1827	0
Flt Permitted	0.481			0.293			0.154			0.217		
Satd. Flow (perm)	896	3483	0	546	3500	0	287	1803	0	404	1827	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	82	491	60	164	397	32	37	391	107	34	481	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	551	0	164	429	0	37	498	0	34	552	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	Gville	Gville		Gville	Gville		Gville	Gville		Gville	Gville	
Leading Detector (ft)	27	27		27	27		27	27		27	27	
Trailing Detector (ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Position(ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Size(ft)	30	30		30	30		30	30		30	30	
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	28.0		11.5	32.0		11.5	32.0	
Total Split (s)	11.5	28.0	0.0	12.0	28.5	0.0	11.5	38.5	0.0	11.5	38.5	0.0
Total Split (%)	12.8%	31.1%	0.0%	13.3%	31.7%	0.0%	12.8%	42.8%	0.0%	12.8%	42.8%	0.0%

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	6.5	23.0		7.0	23.5		6.5	33.5		6.5	33.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		2.5	3.5		2.5	3.5		2.5	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	27.4	20.7		29.5	24.1		30.9	27.4		30.9	27.4	
Actuated g/C Ratio	0.36	0.27		0.38	0.31		0.40	0.36		0.40	0.36	
v/c Ratio	0.21	0.59		0.51	0.39		0.15	0.77		0.12	0.85	
Control Delay	18.3	29.4		23.9	25.7		12.9	32.1		12.5	37.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.3	29.4		23.9	25.7		12.9	32.1		12.5	37.2	
LOS	B	C		C	C		B	C		B	D	
Approach Delay		28.0			25.2			30.8			35.8	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 76.8			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			

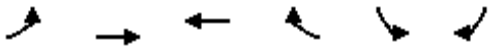
Splits and Phases: 5: NW 34th St & NW 8th Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	82	551	164	429	37	498	34	552
v/c Ratio	0.21	0.59	0.51	0.39	0.15	0.77	0.12	0.85
Control Delay	18.3	29.4	23.9	25.7	12.9	32.1	12.5	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	29.4	23.9	25.7	12.9	32.1	12.5	37.2
Queue Length 50th (ft)	28	140	58	103	9	222	8	256
Queue Length 95th (ft)	59	201	107	153	26	363	25	#449
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	396	1078	325	1186	245	813	282	824
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.51	0.50	0.36	0.15	0.61	0.12	0.67

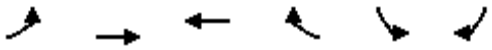
Intersection Summary

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)	14	450	440	15	8	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.995		0.907	
Flt Protected		0.998			0.985	
Satd. Flow (prot)	0	3532	3522	0	1664	0
Flt Permitted		0.998			0.985	
Satd. Flow (perm)	0	3532	3522	0	1664	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3800		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	500	489	17	9	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	516	506	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	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	

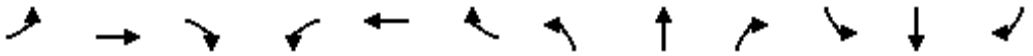
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	14	450	440	15	8	18
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)	16	500	489	17	9	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)		964				
pX, platoon unblocked					0.99	
vC, conflicting volume	506				778	253
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	506				751	253
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	97
cM capacity (veh/h)	1055				337	747

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	182	333	326	180	29
Volume Left	16	0	0	0	9
Volume Right	0	0	0	17	20
cSH	1055	1700	1700	1700	544
Volume to Capacity	0.01	0.20	0.19	0.11	0.05
Queue Length 95th (ft)	1	0	0	0	4
Control Delay (s)	0.8	0.0	0.0	0.0	12.0
Lane LOS	A				B
Approach Delay (s)	0.3		0.0		12.0
Approach LOS					B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	32.6%	ICU Level of Service	A
Analysis Period (min)	15		

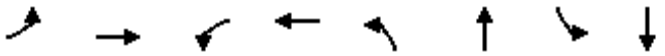


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	350	64	114	306	39	42	428	98	32	490	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.983			0.972			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3458	0	1770	3479	0	1770	1811	0	1770	1831	0
Flt Permitted	0.463			0.389			0.144			0.173		
Satd. Flow (perm)	862	3458	0	725	3479	0	268	1811	0	322	1831	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	87	389	71	127	340	43	47	476	109	36	544	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	460	0	127	383	0	47	585	0	36	613	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	Gville	Gville		Gville	Gville		Gville	Gville		Gville	Gville	
Leading Detector (ft)	27	27		27	27		27	27		27	27	
Trailing Detector (ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Position(ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Size(ft)	30	30		30	30		30	30		30	30	
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	28.0		11.5	32.0		11.5	32.0	
Total Split (s)	11.5	28.0	0.0	11.5	28.0	0.0	11.5	39.0	0.0	11.5	39.0	0.0
Total Split (%)	12.8%	31.1%	0.0%	12.8%	31.1%	0.0%	12.8%	43.3%	0.0%	12.8%	43.3%	0.0%

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	6.5	23.0		6.5	23.0		6.5	34.0		6.5	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	3.5		2.5	3.5		2.5	3.5		2.5	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.0	20.2		25.0	20.2		33.4	30.0		33.4	30.0	
Actuated g/C Ratio	0.33	0.27		0.33	0.27		0.44	0.40		0.44	0.40	
v/c Ratio	0.24	0.50		0.38	0.41		0.18	0.81		0.13	0.84	
Control Delay	19.6	28.6		22.0	27.5		12.5	32.8		11.8	34.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.6	28.6		22.0	27.5		12.5	32.8		11.8	34.8	
LOS	B	C		C	C		B	C		B	C	
Approach Delay		27.1			26.1			31.2			33.5	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.3			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 29.8		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

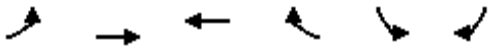
Splits and Phases: 5: NW 34th St & NW 8th Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	87	460	127	383	47	585	36	613
v/c Ratio	0.24	0.50	0.38	0.41	0.18	0.81	0.13	0.84
Control Delay	19.6	28.6	22.0	27.5	12.5	32.8	11.8	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	28.6	22.0	27.5	12.5	32.8	11.8	34.8
Queue Length 50th (ft)	31	118	47	95	11	273	9	291
Queue Length 95th (ft)	63	167	86	138	30	#488	25	#520
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	369	1110	336	1117	255	859	274	869
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.41	0.38	0.34	0.18	0.68	0.13	0.71

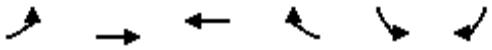
Intersection Summary

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)	28	494	460	10	19	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.997		0.925	
Flt Protected		0.997			0.978	
Satd. Flow (prot)	0	3529	3529	0	1685	0
Flt Permitted		0.997			0.978	
Satd. Flow (perm)	0	3529	3529	0	1685	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3800		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	549	511	11	21	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	580	522	0	47	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	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	

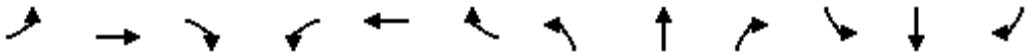
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 40.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	28	494	460	10	19	23
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)	31	549	511	11	21	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		964				
pX, platoon unblocked					0.96	
vC, conflicting volume	522				853	261
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522				775	261
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				93	97
cM capacity (veh/h)	1040				313	738

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	214	366	341	181	47
Volume Left	31	0	0	0	21
Volume Right	0	0	0	11	26
cSH	1040	1700	1700	1700	457
Volume to Capacity	0.03	0.22	0.20	0.11	0.10
Queue Length 95th (ft)	2	0	0	0	8
Control Delay (s)	1.5	0.0	0.0	0.0	13.8
Lane LOS	A				B
Approach Delay (s)	0.6		0.0		13.8
Approach LOS					B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	40.8%	ICU Level of Service	A
Analysis Period (min)	15		

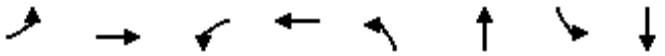


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	363	56	112	326	42	60	389	122	35	436	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.983			0.964			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3479	0	1770	1796	0	1770	1822	0
Flt Permitted	0.433			0.380			0.175			0.211		
Satd. Flow (perm)	807	3468	0	708	3479	0	326	1796	0	393	1822	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	77	403	62	124	362	47	67	432	136	39	484	84
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	465	0	124	409	0	67	568	0	39	568	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	Gville	Gville		Gville	Gville		Gville	Gville		Gville	Gville	
Leading Detector (ft)	27	27		27	27		27	27		27	27	
Trailing Detector (ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Position(ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Size(ft)	30	30		30	30		30	30		30	30	
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	28.0		11.5	32.0		11.5	32.0	
Total Split (s)	11.5	28.0	0.0	11.5	28.0	0.0	11.5	39.0	0.0	11.5	39.0	0.0
Total Split (%)	12.8%	31.1%	0.0%	12.8%	31.1%	0.0%	12.8%	43.3%	0.0%	12.8%	43.3%	0.0%

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	6.5	23.0		6.5	23.0		6.5	34.0		6.5	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	3.5		2.5	3.5		2.5	3.5		2.5	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.1	20.4		25.1	20.4		35.1	31.6		34.1	29.3	
Actuated g/C Ratio	0.33	0.26		0.33	0.26		0.46	0.41		0.44	0.38	
v/c Ratio	0.22	0.51		0.38	0.45		0.24	0.77		0.13	0.82	
Control Delay	19.9	29.5		22.7	28.7		13.0	30.4		11.7	34.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.9	29.5		22.7	28.7		13.0	30.4		11.7	34.5	
LOS	B	C		C	C		B	C		B	C	
Approach Delay		28.2			27.3			28.6			33.1	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.1			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 29.4		Intersection LOS: C	
Intersection Capacity Utilization 71.6%		ICU Level of Service C	
Analysis Period (min) 15			

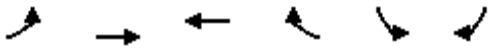
Splits and Phases: 5: NW 34th St & NW 8th Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	77	465	124	409	67	568	39	568
v/c Ratio	0.22	0.51	0.38	0.45	0.24	0.77	0.13	0.82
Control Delay	19.9	29.5	22.7	28.7	13.0	30.4	11.7	34.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	29.5	22.7	28.7	13.0	30.4	11.7	34.5
Queue Length 50th (ft)	27	116	45	101	16	263	9	261
Queue Length 95th (ft)	57	168	85	148	40	#470	26	#464
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	349	1095	326	1099	277	859	297	850
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.42	0.38	0.37	0.24	0.66	0.13	0.67

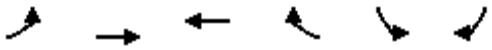
Intersection Summary

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)	61	603	575	51	43	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.988		0.912	
Flt Protected		0.995			0.983	
Satd. Flow (prot)	0	3522	3497	0	1626	0
Flt Permitted		0.995			0.983	
Satd. Flow (perm)	0	3522	3497	0	1626	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3800		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	10%	2%
Adj. Flow (vph)	68	670	639	57	48	91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	738	696	0	139	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	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	

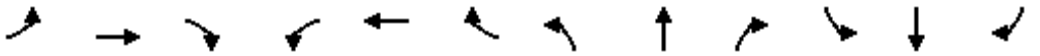
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	61	603	575	51	43	82
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)	68	670	639	57	48	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		964				
pX, platoon unblocked					0.89	
vC, conflicting volume	696				1138	348
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	696				914	348
tC, single (s)	4.1				7.0	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	92				78	86
cM capacity (veh/h)	896				213	648

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	291	447	426	270	139
Volume Left	68	0	0	0	48
Volume Right	0	0	0	57	91
cSH	896	1700	1700	1700	381
Volume to Capacity	0.08	0.26	0.25	0.16	0.36
Queue Length 95th (ft)	6	0	0	0	41
Control Delay (s)	2.8	0.0	0.0	0.0	19.8
Lane LOS	A				C
Approach Delay (s)	1.1		0.0		19.8
Approach LOS					C

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

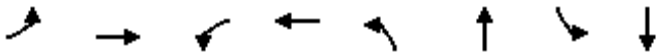


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	444	42	144	438	43	60	408	154	46	438	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.987			0.959			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3493	0	1770	1786	0	1770	1822	0
Flt Permitted	0.357			0.221			0.208			0.157		
Satd. Flow (perm)	665	3493	0	412	3493	0	387	1786	0	292	1822	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	98	493	47	160	487	48	67	453	171	51	487	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	540	0	160	535	0	67	624	0	51	569	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	Gville	Gville		Gville	Gville		Gville	Gville		Gville	Gville	
Leading Detector (ft)	27	27		27	27		27	27		27	27	
Trailing Detector (ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Position(ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Size(ft)	30	30		30	30		30	30		30	30	
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	28.0		11.5	32.0		11.5	32.0	
Total Split (s)	15.0	41.0	0.0	23.0	49.0	0.0	12.0	86.0	0.0	12.0	86.0	0.0
Total Split (%)	9.3%	25.3%	0.0%	14.2%	30.2%	0.0%	7.4%	53.1%	0.0%	7.4%	53.1%	0.0%

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	10.0	36.0		18.0	44.0		7.0	81.0		7.0	81.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	3.5		2.5	3.5		2.5	3.5		2.5	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.1	25.2		42.3	29.6		50.5	45.4		50.5	45.4	
Actuated g/C Ratio	0.31	0.23		0.39	0.27		0.46	0.42		0.46	0.42	
v/c Ratio	0.33	0.67		0.49	0.56		0.25	0.84		0.22	0.75	
Control Delay	29.2	46.1		31.0	39.4		16.8	40.7		16.7	34.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	29.2	46.1		31.0	39.4		16.8	40.7		16.7	34.8	
LOS	C	D		C	D		B	D		B	C	
Approach Delay		43.5			37.4			38.4			33.3	
Approach LOS		D			D			D			C	

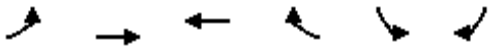
Intersection Summary			
Area Type:	Other		
Cycle Length: 162			
Actuated Cycle Length: 109.1			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 38.2		Intersection LOS: D	
Intersection Capacity Utilization 76.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave



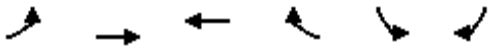
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	540	160	535	67	624	51	569
v/c Ratio	0.33	0.67	0.49	0.56	0.25	0.84	0.22	0.75
Control Delay	29.2	46.1	31.0	39.4	16.8	40.7	16.7	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	46.1	31.0	39.4	16.8	40.7	16.7	34.8
Queue Length 50th (ft)	44	186	75	174	22	384	17	331
Queue Length 95th (ft)	106	323	164	297	56	658	45	568
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	330	1250	409	1527	276	1354	238	1381
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.43	0.39	0.35	0.24	0.46	0.21	0.41

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	642	784	58	15	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Frt			0.990		0.899	
Flt Protected		0.996			0.987	
Satd. Flow (prot)	0	3525	3504	0	1653	0
Flt Permitted		0.996			0.987	
Satd. Flow (perm)	0	3525	3504	0	1653	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3800		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	713	871	64	17	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	769	935	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	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	

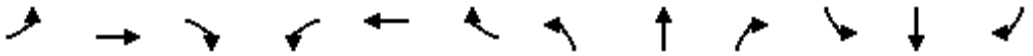
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.3%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	50	642	784	58	15	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)	56	713	871	64	17	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)		964				
pX, platoon unblocked					0.84	
vC, conflicting volume	936				1371	468
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	936				1068	468
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				90	91
cM capacity (veh/h)	728				169	542

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	293	476	581	355	67
Volume Left	56	0	0	0	17
Volume Right	0	0	0	64	50
cSH	728	1700	1700	1700	349
Volume to Capacity	0.08	0.28	0.34	0.21	0.19
Queue Length 95th (ft)	6	0	0	0	17
Control Delay (s)	2.7	0.0	0.0	0.0	17.7
Lane LOS	A				C
Approach Delay (s)	1.0		0.0		17.7
Approach LOS					C

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

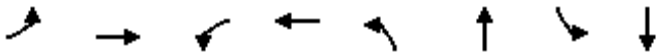


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	538	68	202	621	75	81	597	136	56	551	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.984			0.972			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3483	0	1770	1811	0	1770	1822	0
Flt Permitted	0.134			0.108			0.128			0.075		
Satd. Flow (perm)	250	3479	0	201	3483	0	238	1811	0	140	1822	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	144	598	76	224	690	83	90	663	151	62	612	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	674	0	224	773	0	90	814	0	62	719	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	Gville	Gville		Gville	Gville		Gville	Gville		Gville	Gville	
Leading Detector (ft)	27	27		27	27		27	27		27	27	
Trailing Detector (ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Position(ft)	-3	-3		-3	-3		-3	-3		-3	-3	
Detector 1 Size(ft)	30	30		30	30		30	30		30	30	
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	28.0		11.5	32.0		11.5	32.0	
Total Split (s)	17.7	39.0	0.0	25.0	46.3	0.0	11.6	86.5	0.0	11.5	86.4	0.0
Total Split (%)	10.9%	24.1%	0.0%	15.4%	28.6%	0.0%	7.2%	53.4%	0.0%	7.1%	53.3%	0.0%

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Maximum Green (s)	12.7	34.0		20.0	41.3		6.6	81.5		6.5	81.4	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	3.5		2.5	3.5		2.5	3.5		2.5	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		16.0			16.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.6	31.9		55.1	38.4		76.3	71.4		74.7	68.0	
Actuated g/C Ratio	0.30	0.22		0.38	0.26		0.52	0.49		0.51	0.47	
v/c Ratio	0.73	0.88		0.82	0.84		0.46	0.92		0.42	0.84	
Control Delay	57.0	70.8		63.8	61.9		23.4	51.3		24.4	44.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	57.0	70.8		63.8	61.9		23.4	51.3		24.4	44.2	
LOS	E	E		E	E		C	D		C	D	
Approach Delay		68.4			62.3			48.5			42.6	
Approach LOS		E			E			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 162			
Actuated Cycle Length: 145.5			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 55.8		Intersection LOS: E	
Intersection Capacity Utilization 90.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave

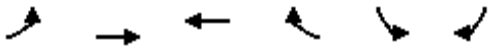


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	144	674	224	773	90	814	62	719
v/c Ratio	0.73	0.88	0.82	0.84	0.46	0.92	0.42	0.84
Control Delay	57.0	70.8	63.8	61.9	23.4	51.3	24.4	44.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	70.8	63.8	61.9	23.4	51.3	24.4	44.2
Queue Length 50th (ft)	102	361	173	403	41	765	28	615
Queue Length 95th (ft)	#198	#488	#325	#503	71	#1046	52	797
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	214	840	299	1021	197	1048	147	1053
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.80	0.75	0.76	0.46	0.78	0.42	0.68

Intersection Summary

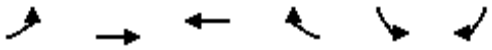
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Appendix D
Synchro Software Output
(Alternative A Conditions)



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	34	514	474	34	52	58
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		0.929	
Flt Protected	0.950				0.977	
Satd. Flow (prot)	1770	1863	1846	0	1472	0
Flt Permitted	0.950				0.977	
Satd. Flow (perm)	1770	1863	1846	0	1472	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	25%	10%
Adj. Flow (vph)	38	571	527	38	58	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	571	565	0	122	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		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	

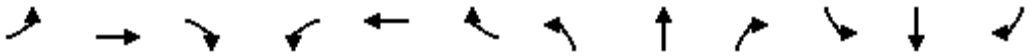
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	34	514	474	34	52	58
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)	38	571	527	38	58	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		964				
pX, platoon unblocked					0.80	
vC, conflicting volume	564				1192	546
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	564				1116	546
tC, single (s)	4.1				6.6	6.3
tC, 2 stage (s)						
tF (s)	2.2				3.7	3.4
p0 queue free %	96				64	88
cM capacity (veh/h)	1007				160	523

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	38	571	564	122
Volume Left	38	0	0	58
Volume Right	0	0	38	64
cSH	1007	1700	1700	252
Volume to Capacity	0.04	0.34	0.33	0.48
Queue Length 95th (ft)	3	0	0	61
Control Delay (s)	8.7	0.0	0.0	32.0
Lane LOS	A			D
Approach Delay (s)	0.5		0.0	32.0
Approach LOS				D

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	41.4%	ICU Level of Service	A
Analysis Period (min)	15		

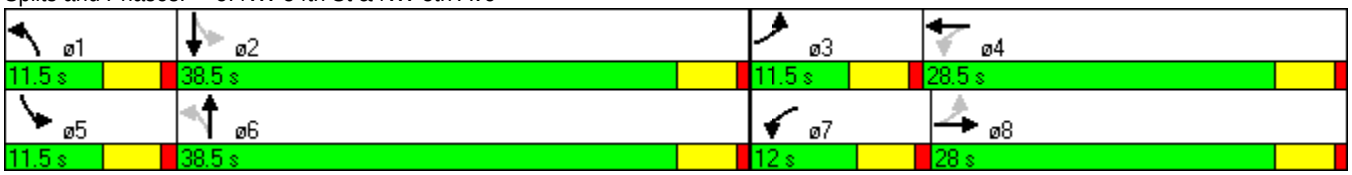


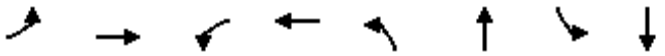
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	442	54	148	357	29	33	352	96	31	433	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.989			0.968			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3483	0	1770	3500	0	1770	1803	0	1770	1827	0
Flt Permitted	0.484			0.294			0.151			0.215		
Satd. Flow (perm)	902	3483	0	548	3500	0	281	1803	0	400	1827	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					9			17				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	82	491	60	164	397	32	37	391	107	34	481	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	551	0	164	429	0	37	498	0	34	552	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	11.5	28.0	0.0	12.0	28.5	0.0	11.5	38.5	0.0	11.5	38.5	0.0
Total Split (%)	12.8%	31.1%	0.0%	13.3%	31.7%	0.0%	12.8%	42.8%	0.0%	12.8%	42.8%	0.0%
Maximum Green (s)	6.5	23.0		7.0	23.5		6.5	33.5		6.5	33.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	27.7	20.9		29.9	24.5		31.0	27.5		31.0	27.5	
Actuated g/C Ratio	0.36	0.27		0.39	0.32		0.40	0.36		0.40	0.36	
v/c Ratio	0.21	0.58		0.50	0.38		0.15	0.76		0.12	0.85	
Control Delay	18.2	29.3		23.7	25.0		13.1	30.7		12.6	37.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.2	29.3		23.7	25.0		13.1	30.7		12.6	37.6	
LOS	B	C		C	C		B	C		B	D	
Approach Delay		27.9			24.6			29.5			36.2	
Approach LOS		C			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.3			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 29.5		Intersection LOS: C	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave

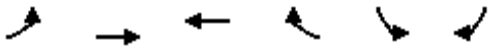




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	82	551	164	429	37	498	34	552
v/c Ratio	0.21	0.58	0.50	0.38	0.15	0.76	0.12	0.85
Control Delay	18.2	29.3	23.7	25.0	13.1	30.7	12.6	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	29.3	23.7	25.0	13.1	30.7	12.6	37.6
Queue Length 50th (ft)	28	141	59	102	9	218	9	261
Queue Length 95th (ft)	59	201	107	151	26	352	25	#449
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	398	1073	326	1190	242	818	279	819
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.51	0.50	0.36	0.15	0.61	0.12	0.67

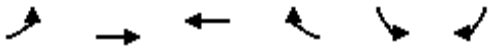
Intersection Summary

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)	14	450	440	15	8	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			0.995		0.907	
Flt Protected	0.950				0.985	
Satd. Flow (prot)	1770	1863	1853	0	1664	0
Flt Permitted	0.950				0.985	
Satd. Flow (perm)	1770	1863	1853	0	1664	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	500	489	17	9	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	500	506	0	29	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		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	

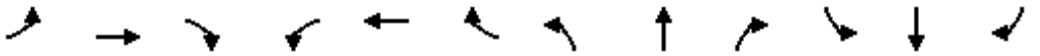
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	14	450	440	15	8	18
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)	16	500	489	17	9	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)		964				
pX, platoon unblocked					0.84	
vC, conflicting volume	506				1028	497
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	506				941	497
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				96	97
cM capacity (veh/h)	1059				243	573

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	16	500	506	29
Volume Left	16	0	0	9
Volume Right	0	0	17	20
cSH	1059	1700	1700	404
Volume to Capacity	0.01	0.29	0.30	0.07
Queue Length 95th (ft)	1	0	0	6
Control Delay (s)	8.4	0.0	0.0	14.6
Lane LOS	A			B
Approach Delay (s)	0.3		0.0	14.6
Approach LOS				B

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		

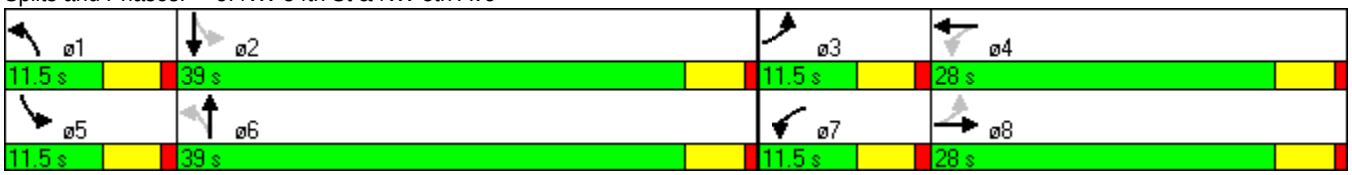


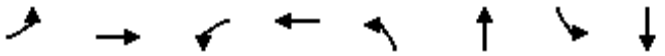
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	350	64	114	306	39	42	428	98	32	490	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.983			0.972			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3458	0	1770	3479	0	1770	1811	0	1770	1831	0
Flt Permitted	0.464			0.390			0.143			0.172		
Satd. Flow (perm)	864	3458	0	726	3479	0	266	1811	0	320	1831	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					15			15				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	87	389	71	127	340	43	47	476	109	36	544	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	460	0	127	383	0	47	585	0	36	613	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	11.5	28.0	0.0	11.5	28.0	0.0	11.5	39.0	0.0	11.5	39.0	0.0
Total Split (%)	12.8%	31.1%	0.0%	12.8%	31.1%	0.0%	12.8%	43.3%	0.0%	12.8%	43.3%	0.0%
Maximum Green (s)	6.5	23.0		6.5	23.0		6.5	34.0		6.5	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.3	20.4		25.3	20.4		33.4	30.1		33.4	30.1	
Actuated g/C Ratio	0.33	0.27		0.33	0.27		0.44	0.40		0.44	0.40	
v/c Ratio	0.23	0.49		0.38	0.40		0.19	0.80		0.13	0.84	
Control Delay	19.5	28.4		21.9	26.2		12.6	31.7		11.9	35.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.5	28.4		21.9	26.2		12.6	31.7		11.9	35.2	
LOS	B	C		C	C		B	C		B	D	
Approach Delay		27.0			25.2			30.3			33.9	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.6			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 29.4		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave

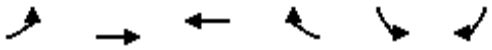




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	87	460	127	383	47	585	36	613
v/c Ratio	0.23	0.49	0.38	0.40	0.19	0.80	0.13	0.84
Control Delay	19.5	28.4	21.9	26.2	12.6	31.7	11.9	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	28.4	21.9	26.2	12.6	31.7	11.9	35.2
Queue Length 50th (ft)	31	118	47	92	11	265	9	291
Queue Length 95th (ft)	63	166	86	134	30	#481	25	#524
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	371	1108	337	1125	254	865	273	867
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.42	0.38	0.34	0.19	0.68	0.13	0.71

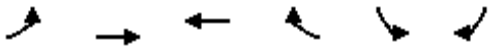
Intersection Summary

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)	28	494	460	10	19	23
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			0.997		0.925	
Flt Protected	0.950				0.978	
Satd. Flow (prot)	1770	1863	1857	0	1685	0
Flt Permitted	0.950				0.978	
Satd. Flow (perm)	1770	1863	1857	0	1685	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	549	511	11	21	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	549	522	0	47	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		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	

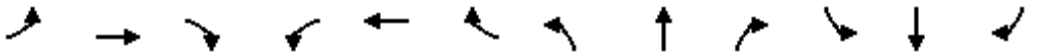
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	28	494	460	10	19	23
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)	31	549	511	11	21	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		964				
pX, platoon unblocked					0.83	
vC, conflicting volume	522				1128	517
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522				1053	517
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				90	95
cM capacity (veh/h)	1044				202	559

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	31	549	522	47
Volume Left	31	0	0	21
Volume Right	0	0	11	26
cSH	1044	1700	1700	311
Volume to Capacity	0.03	0.32	0.31	0.15
Queue Length 95th (ft)	2	0	0	13
Control Delay (s)	8.6	0.0	0.0	18.6
Lane LOS	A			C
Approach Delay (s)	0.5		0.0	18.6
Approach LOS				C

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)	15		

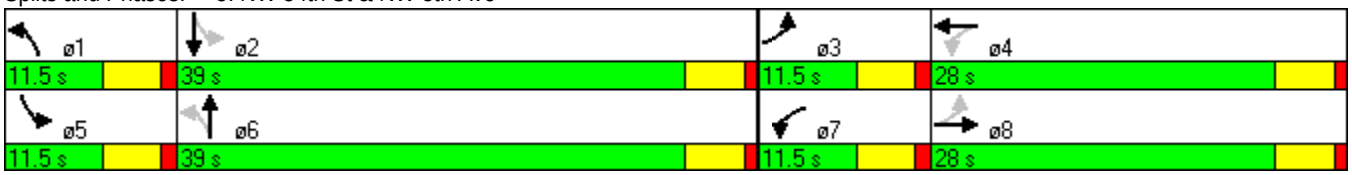


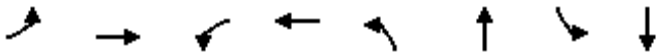
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	365	56	112	326	40	60	391	122	33	436	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.984			0.964			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3483	0	1770	1796	0	1770	1824	0
Flt Permitted	0.438			0.379			0.176			0.205		
Satd. Flow (perm)	816	3468	0	706	3483	0	328	1796	0	382	1824	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					14			20				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	77	406	62	124	362	44	67	434	136	37	484	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	468	0	124	406	0	67	570	0	37	563	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	11.5	28.0	0.0	11.5	28.0	0.0	11.5	39.0	0.0	11.5	39.0	0.0
Total Split (%)	12.8%	31.1%	0.0%	12.8%	31.1%	0.0%	12.8%	43.3%	0.0%	12.8%	43.3%	0.0%
Maximum Green (s)	6.5	23.0		6.5	23.0		6.5	34.0		6.5	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.3	20.6		25.3	20.6		34.8	31.3		33.8	29.0	
Actuated g/C Ratio	0.33	0.27		0.33	0.27		0.45	0.41		0.44	0.38	
v/c Ratio	0.22	0.50		0.38	0.43		0.24	0.77		0.13	0.82	
Control Delay	19.7	29.3		22.4	27.3		13.2	29.5		11.8	34.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.7	29.3		22.4	27.3		13.2	29.5		11.8	34.7	
LOS	B	C		C	C		B	C		B	C	
Approach Delay		27.9			26.2			27.8			33.3	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 28.9		Intersection LOS: C	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave

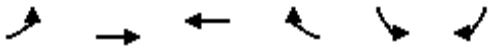




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	77	468	124	406	67	570	37	563
v/c Ratio	0.22	0.50	0.38	0.43	0.24	0.77	0.13	0.82
Control Delay	19.7	29.3	22.4	27.3	13.2	29.5	11.8	34.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	29.3	22.4	27.3	13.2	29.5	11.8	34.7
Queue Length 50th (ft)	26	115	44	94	16	254	9	257
Queue Length 95th (ft)	57	170	85	142	40	#460	25	#460
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	354	1096	327	1111	277	869	292	852
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.43	0.38	0.37	0.24	0.66	0.13	0.66

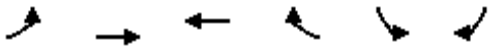
Intersection Summary

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)	61	603	575	51	43	82
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			0.989		0.912	
Flt Protected	0.950				0.983	
Satd. Flow (prot)	1770	1863	1842	0	1626	0
Flt Permitted	0.950				0.983	
Satd. Flow (perm)	1770	1863	1842	0	1626	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	10%	2%
Adj. Flow (vph)	68	670	639	57	48	91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	670	696	0	139	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		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	

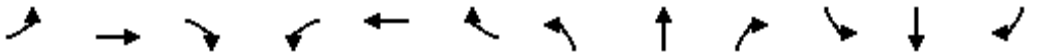
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	61	603	575	51	43	82
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)	68	670	639	57	48	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		964				
pX, platoon unblocked					0.80	
vC, conflicting volume	696				1473	667
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	696				1466	667
tC, single (s)	4.1				6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	92				52	80
cM capacity (veh/h)	900				100	459

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	68	670	696	139
Volume Left	68	0	0	48
Volume Right	0	0	57	91
cSH	900	1700	1700	205
Volume to Capacity	0.08	0.39	0.41	0.68
Queue Length 95th (ft)	6	0	0	104
Control Delay (s)	9.3	0.0	0.0	52.8
Lane LOS	A			F
Approach Delay (s)	0.9		0.0	52.8
Approach LOS				F

Intersection Summary			
Average Delay	5.1		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		

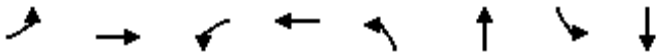


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	444	42	144	438	43	60	408	154	46	438	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.987			0.959			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3493	0	1770	1786	0	1770	1822	0
Flt Permitted	0.367			0.221			0.203			0.149		
Satd. Flow (perm)	684	3493	0	412	3493	0	378	1786	0	278	1822	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					6			17				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	98	493	47	160	487	48	67	453	171	51	487	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	540	0	160	535	0	67	624	0	51	569	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	15.0	41.0	0.0	23.0	49.0	0.0	12.0	86.0	0.0	12.0	86.0	0.0
Total Split (%)	9.3%	25.3%	0.0%	14.2%	30.2%	0.0%	7.4%	53.1%	0.0%	7.4%	53.1%	0.0%
Maximum Green (s)	10.0	36.0		18.0	44.0		7.0	81.0		7.0	81.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.6	25.7		43.5	30.5		50.1	44.9		50.2	45.0	
Actuated g/C Ratio	0.32	0.23		0.40	0.28		0.46	0.41		0.46	0.41	
v/c Ratio	0.32	0.66		0.48	0.55		0.25	0.84		0.22	0.76	
Control Delay	28.5	45.5		30.1	38.1		17.3	40.4		17.2	35.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.5	45.5		30.1	38.1		17.3	40.4		17.2	35.8	
LOS	C	D		C	D		B	D		B	D	
Approach Delay		42.9			36.2			38.1			34.3	
Approach LOS		D			D			D			C	

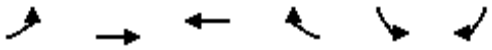
Intersection Summary			
Area Type:	Other		
Cycle Length: 162			
Actuated Cycle Length: 109.5			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 37.9		Intersection LOS: D	
Intersection Capacity Utilization 76.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave



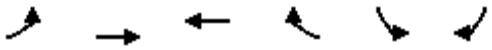
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	540	160	535	67	624	51	569
v/c Ratio	0.32	0.66	0.48	0.55	0.25	0.84	0.22	0.76
Control Delay	28.5	45.5	30.1	38.1	17.3	40.4	17.2	35.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	45.5	30.1	38.1	17.3	40.4	17.2	35.8
Queue Length 50th (ft)	44	186	75	171	23	379	17	337
Queue Length 95th (ft)	105	319	162	290	56	646	45	572
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	335	1241	410	1521	269	1352	231	1375
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.44	0.39	0.35	0.25	0.46	0.22	0.41

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	642	784	58	15	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			0.991		0.899	
Flt Protected	0.950				0.987	
Satd. Flow (prot)	1770	1863	1846	0	1653	0
Flt Permitted	0.950				0.987	
Satd. Flow (perm)	1770	1863	1846	0	1653	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	713	871	64	17	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	713	935	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		24	24		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	

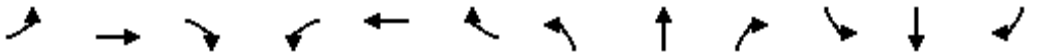
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.0%		ICU Level of Service B	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	50	642	784	58	15	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)	56	713	871	64	17	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)		964				
pX, platoon unblocked					0.78	
vC, conflicting volume	936				1728	903
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	936				1792	903
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				74	85
cM capacity (veh/h)	732				64	336

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	56	713	936	67
Volume Left	56	0	0	17
Volume Right	0	0	64	50
cSH	732	1700	1700	163
Volume to Capacity	0.08	0.42	0.55	0.41
Queue Length 95th (ft)	6	0	0	45
Control Delay (s)	10.3	0.0	0.0	41.7
Lane LOS	B			E
Approach Delay (s)	0.7		0.0	41.7
Approach LOS				E

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

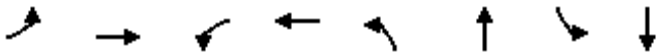


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	538	68	202	621	75	81	597	136	56	551	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.984			0.972			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3483	0	1770	1811	0	1770	1822	0
Flt Permitted	0.135			0.108			0.126			0.073		
Satd. Flow (perm)	251	3479	0	201	3483	0	235	1811	0	136	1822	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					8			10				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	144	598	76	224	690	83	90	663	151	62	612	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	674	0	224	773	0	90	814	0	62	719	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	18.0	39.0	0.0	25.0	46.0	0.0	11.6	86.4	0.0	11.6	86.4	0.0
Total Split (%)	11.1%	24.1%	0.0%	15.4%	28.4%	0.0%	7.2%	53.3%	0.0%	7.2%	53.3%	0.0%
Maximum Green (s)	13.0	34.0		20.0	41.0		6.6	81.4		6.6	81.4	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.9	32.1		55.5	38.6		76.1	71.2		74.7	67.9	
Actuated g/C Ratio	0.30	0.22		0.38	0.26		0.52	0.49		0.51	0.47	
v/c Ratio	0.72	0.88		0.82	0.83		0.46	0.91		0.42	0.85	
Control Delay	56.1	70.4		62.9	60.6		23.7	50.8		24.7	44.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	56.1	70.4		62.9	60.6		23.7	50.8		24.7	44.5	
LOS	E	E		E	E		C	D		C	D	
Approach Delay		67.9			61.1			48.1			43.0	
Approach LOS		E			E			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 162			
Actuated Cycle Length: 145.7			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 55.3		Intersection LOS: E	
Intersection Capacity Utilization 90.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave

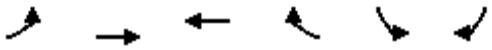


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	144	674	224	773	90	814	62	719
v/c Ratio	0.72	0.88	0.82	0.83	0.46	0.91	0.42	0.85
Control Delay	56.1	70.4	62.9	60.6	23.7	50.8	24.7	44.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.1	70.4	62.9	60.6	23.7	50.8	24.7	44.5
Queue Length 50th (ft)	101	358	172	396	41	756	28	615
Queue Length 95th (ft)	#194	#488	#325	#500	71	#1037	52	797
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	218	837	299	1016	194	1047	146	1049
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.81	0.75	0.76	0.46	0.78	0.42	0.69

Intersection Summary

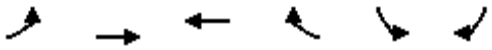
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Appendix E
Synchro Software Output
(Alternative B Conditions)



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	34	514	474	34	52	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.991			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	1846	0	1444	1468
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	1846	0	1444	1468
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	25%	10%
Adj. Flow (vph)	38	571	527	38	58	64
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	571	565	0	58	64
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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)	15			9	15	9
Sign Control		Free	Free		Stop	

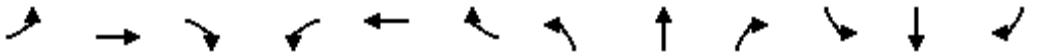
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	34	514	474	34	52	58
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)	38	571	527	38	58	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		964				
pX, platoon unblocked					0.96	
vC, conflicting volume	564				907	546
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	564				812	546
tC, single (s)	4.1				7.3	7.1
tC, 2 stage (s)						
tF (s)	2.2				3.8	3.4
p0 queue free %	96				77	86
cM capacity (veh/h)	1003				252	462

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	SB 1	SB 2
Volume Total	38	286	286	564	58	64
Volume Left	38	0	0	0	58	0
Volume Right	0	0	0	38	0	64
cSH	1003	1700	1700	1700	252	462
Volume to Capacity	0.04	0.17	0.17	0.33	0.23	0.14
Queue Length 95th (ft)	3	0	0	0	22	12
Control Delay (s)	8.7	0.0	0.0	0.0	23.4	14.1
Lane LOS	A				C	B
Approach Delay (s)	0.5			0.0	18.5	
Approach LOS					C	

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		



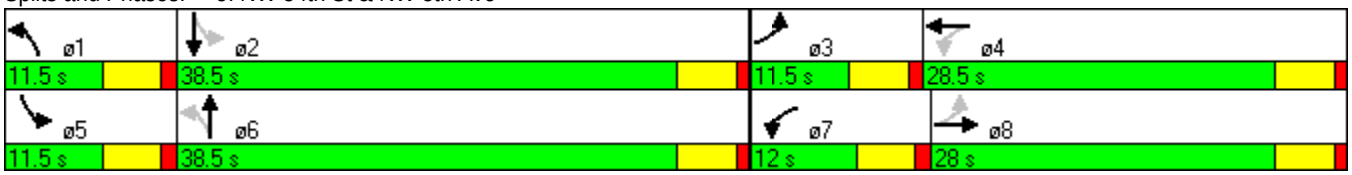
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	442	54	148	357	29	33	352	96	31	433	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.984			0.989			0.968			0.981	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3483	0	1770	3500	0	1770	1803	0	1770	1827	0
Flt Permitted	0.484			0.294			0.151			0.215		
Satd. Flow (perm)	902	3483	0	548	3500	0	281	1803	0	400	1827	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					9			17				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	82	491	60	164	397	32	37	391	107	34	481	71
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	551	0	164	429	0	37	498	0	34	552	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

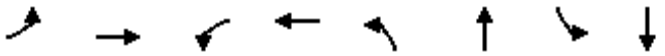
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	11.5	28.0	0.0	12.0	28.5	0.0	11.5	38.5	0.0	11.5	38.5	0.0
Total Split (%)	12.8%	31.1%	0.0%	13.3%	31.7%	0.0%	12.8%	42.8%	0.0%	12.8%	42.8%	0.0%
Maximum Green (s)	6.5	23.0		7.0	23.5		6.5	33.5		6.5	33.5	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	27.7	20.9		29.9	24.5		31.0	27.5		31.0	27.5	
Actuated g/C Ratio	0.36	0.27		0.39	0.32		0.40	0.36		0.40	0.36	
v/c Ratio	0.21	0.58		0.50	0.38		0.15	0.76		0.12	0.85	
Control Delay	18.2	29.3		23.7	25.0		13.1	30.7		12.6	37.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.2	29.3		23.7	25.0		13.1	30.7		12.6	37.6	
LOS	B	C		C	C		B	C		B	D	
Approach Delay		27.9			24.6			29.5			36.2	
Approach LOS		C			C			C			D	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 77.3
Natural Cycle: 85
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 29.5 Intersection LOS: C
Intersection Capacity Utilization 63.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 5: NW 34th St & NW 8th Ave

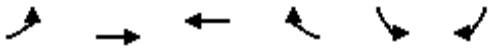




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	82	551	164	429	37	498	34	552
v/c Ratio	0.21	0.58	0.50	0.38	0.15	0.76	0.12	0.85
Control Delay	18.2	29.3	23.7	25.0	13.1	30.7	12.6	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	29.3	23.7	25.0	13.1	30.7	12.6	37.6
Queue Length 50th (ft)	28	141	59	102	9	218	9	261
Queue Length 95th (ft)	59	201	107	151	26	352	25	#449
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	398	1073	326	1190	242	818	279	819
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.51	0.50	0.36	0.15	0.61	0.12	0.67

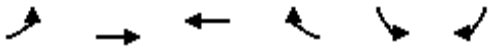
Intersection Summary

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)	14	450	440	15	8	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.995			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	1853	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	1853	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	16	500	489	17	9	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	16	500	506	0	9	20
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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)	15			9	15	9
Sign Control		Free	Free		Stop	

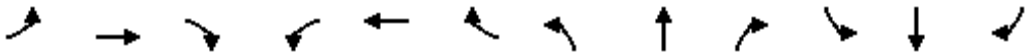
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	14	450	440	15	8	18
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)	16	500	489	17	9	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)		964				
pX, platoon unblocked					1.00	
vC, conflicting volume	506				778	497
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	506				774	497
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	96
cM capacity (veh/h)	1055				329	518

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	SB 1	SB 2
Volume Total	16	250	250	506	9	20
Volume Left	16	0	0	0	9	0
Volume Right	0	0	0	17	0	20
cSH	1055	1700	1700	1700	329	518
Volume to Capacity	0.01	0.15	0.15	0.30	0.03	0.04
Queue Length 95th (ft)	1	0	0	0	2	3
Control Delay (s)	8.5	0.0	0.0	0.0	16.2	12.2
Lane LOS	A				C	B
Approach Delay (s)	0.3			0.0	13.5	
Approach LOS					B	

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		

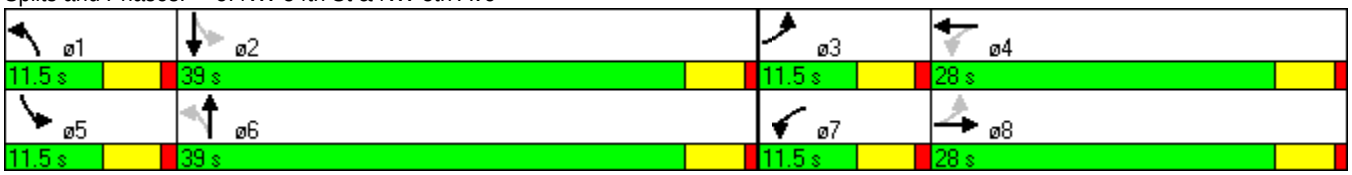


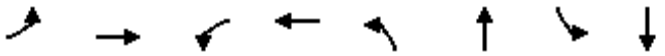
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	78	350	64	114	306	39	42	428	98	32	490	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.983			0.972			0.983	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3458	0	1770	3479	0	1770	1811	0	1770	1831	0
Flt Permitted	0.464			0.390			0.143			0.172		
Satd. Flow (perm)	864	3458	0	726	3479	0	266	1811	0	320	1831	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					15			15				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	87	389	71	127	340	43	47	476	109	36	544	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	460	0	127	383	0	47	585	0	36	613	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	11.5	28.0	0.0	11.5	28.0	0.0	11.5	39.0	0.0	11.5	39.0	0.0
Total Split (%)	12.8%	31.1%	0.0%	12.8%	31.1%	0.0%	12.8%	43.3%	0.0%	12.8%	43.3%	0.0%
Maximum Green (s)	6.5	23.0		6.5	23.0		6.5	34.0		6.5	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.3	20.4		25.3	20.4		33.4	30.1		33.4	30.1	
Actuated g/C Ratio	0.33	0.27		0.33	0.27		0.44	0.40		0.44	0.40	
v/c Ratio	0.23	0.49		0.38	0.40		0.19	0.80		0.13	0.84	
Control Delay	19.5	28.4		21.9	26.2		12.6	31.7		11.9	35.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.5	28.4		21.9	26.2		12.6	31.7		11.9	35.2	
LOS	B	C		C	C		B	C		B	D	
Approach Delay		27.0			25.2			30.3			33.9	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 75.6			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 29.4		Intersection LOS: C	
Intersection Capacity Utilization 69.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave

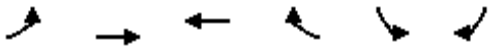




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	87	460	127	383	47	585	36	613
v/c Ratio	0.23	0.49	0.38	0.40	0.19	0.80	0.13	0.84
Control Delay	19.5	28.4	21.9	26.2	12.6	31.7	11.9	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.5	28.4	21.9	26.2	12.6	31.7	11.9	35.2
Queue Length 50th (ft)	31	118	47	92	11	265	9	291
Queue Length 95th (ft)	63	166	86	134	30	#481	25	#524
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	371	1108	337	1125	254	865	273	867
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.42	0.38	0.34	0.19	0.68	0.13	0.71

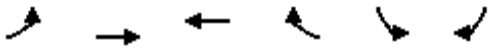
Intersection Summary

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)	28	494	460	10	19	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.997			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	1857	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	1857	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	31	549	511	11	21	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	549	522	0	21	26
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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)	15			9	15	9
Sign Control		Free	Free		Stop	

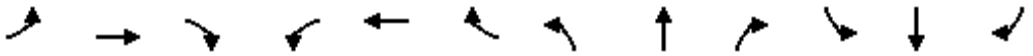
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	28	494	460	10	19	23
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)	31	549	511	11	21	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		964				
pX, platoon unblocked					0.98	
vC, conflicting volume	522				853	517
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	522				809	517
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				93	95
cM capacity (veh/h)	1040				303	503

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	SB 1	SB 2
Volume Total	31	274	274	522	21	26
Volume Left	31	0	0	0	21	0
Volume Right	0	0	0	11	0	26
cSH	1040	1700	1700	1700	303	503
Volume to Capacity	0.03	0.16	0.16	0.31	0.07	0.05
Queue Length 95th (ft)	2	0	0	0	6	4
Control Delay (s)	8.6	0.0	0.0	0.0	17.8	12.5
Lane LOS	A				C	B
Approach Delay (s)	0.5			0.0	14.9	
Approach LOS					B	

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

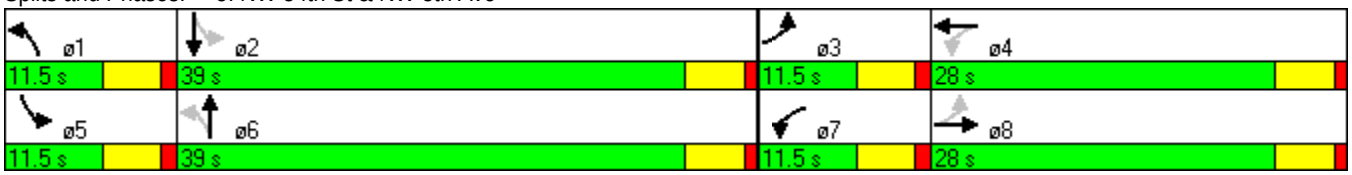


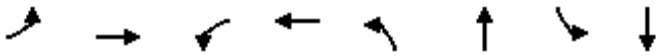
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	365	56	112	326	40	60	391	122	33	436	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980			0.984			0.964			0.979	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3468	0	1770	3483	0	1770	1796	0	1770	1824	0
Flt Permitted	0.438			0.379			0.176			0.205		
Satd. Flow (perm)	816	3468	0	706	3483	0	328	1796	0	382	1824	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					14			20				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	77	406	62	124	362	44	67	434	136	37	484	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	77	468	0	124	406	0	67	570	0	37	563	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	11.5	28.0	0.0	11.5	28.0	0.0	11.5	39.0	0.0	11.5	39.0	0.0
Total Split (%)	12.8%	31.1%	0.0%	12.8%	31.1%	0.0%	12.8%	43.3%	0.0%	12.8%	43.3%	0.0%
Maximum Green (s)	6.5	23.0		6.5	23.0		6.5	34.0		6.5	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	25.3	20.6		25.3	20.6		34.8	31.3		33.8	29.0	
Actuated g/C Ratio	0.33	0.27		0.33	0.27		0.45	0.41		0.44	0.38	
v/c Ratio	0.22	0.50		0.38	0.43		0.24	0.77		0.13	0.82	
Control Delay	19.7	29.3		22.4	27.3		13.2	29.5		11.8	34.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.7	29.3		22.4	27.3		13.2	29.5		11.8	34.7	
LOS	B	C		C	C		B	C		B	C	
Approach Delay		27.9			26.2			27.8			33.3	
Approach LOS		C			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 28.9		Intersection LOS: C	
Intersection Capacity Utilization 71.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave

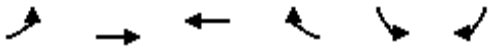




Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	77	468	124	406	67	570	37	563
v/c Ratio	0.22	0.50	0.38	0.43	0.24	0.77	0.13	0.82
Control Delay	19.7	29.3	22.4	27.3	13.2	29.5	11.8	34.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.7	29.3	22.4	27.3	13.2	29.5	11.8	34.7
Queue Length 50th (ft)	26	115	44	94	16	254	9	257
Queue Length 95th (ft)	57	170	85	142	40	#460	25	#460
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	354	1096	327	1111	277	869	292	852
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.43	0.38	0.37	0.24	0.66	0.13	0.66

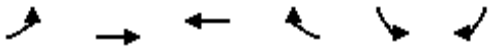
Intersection Summary

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)	61	603	575	51	43	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.989			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	1842	0	1641	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	1842	0	1641	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	2%	2%	2%	10%	2%
Adj. Flow (vph)	68	670	639	57	48	91
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	670	696	0	48	91
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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)	15			9	15	9
Sign Control		Free	Free		Stop	

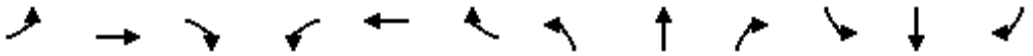
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	61	603	575	51	43	82
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)	68	670	639	57	48	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		964				
pX, platoon unblocked					0.91	
vC, conflicting volume	696				1138	667
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	696				959	667
tC, single (s)	4.1				7.0	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.6	3.3
p0 queue free %	92				76	77
cM capacity (veh/h)	896				203	401

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	SB 1	SB 2
Volume Total	68	335	335	696	48	91
Volume Left	68	0	0	0	48	0
Volume Right	0	0	0	57	0	91
cSH	896	1700	1700	1700	203	401
Volume to Capacity	0.08	0.20	0.20	0.41	0.24	0.23
Queue Length 95th (ft)	6	0	0	0	22	22
Control Delay (s)	9.3	0.0	0.0	0.0	28.1	16.6
Lane LOS	A				D	C
Approach Delay (s)	0.9			0.0	20.5	
Approach LOS					C	

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

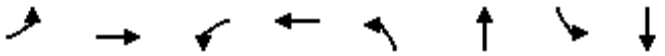


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	444	42	144	438	43	60	408	154	46	438	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.987			0.959			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3493	0	1770	3493	0	1770	1786	0	1770	1822	0
Flt Permitted	0.367			0.221			0.203			0.149		
Satd. Flow (perm)	684	3493	0	412	3493	0	378	1786	0	278	1822	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					6			17				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	98	493	47	160	487	48	67	453	171	51	487	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	540	0	160	535	0	67	624	0	51	569	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	15.0	41.0	0.0	23.0	49.0	0.0	12.0	86.0	0.0	12.0	86.0	0.0
Total Split (%)	9.3%	25.3%	0.0%	14.2%	30.2%	0.0%	7.4%	53.1%	0.0%	7.4%	53.1%	0.0%
Maximum Green (s)	10.0	36.0		18.0	44.0		7.0	81.0		7.0	81.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.6	25.7		43.5	30.5		50.1	44.9		50.2	45.0	
Actuated g/C Ratio	0.32	0.23		0.40	0.28		0.46	0.41		0.46	0.41	
v/c Ratio	0.32	0.66		0.48	0.55		0.25	0.84		0.22	0.76	
Control Delay	28.5	45.5		30.1	38.1		17.3	40.4		17.2	35.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	28.5	45.5		30.1	38.1		17.3	40.4		17.2	35.8	
LOS	C	D		C	D		B	D		B	D	
Approach Delay		42.9			36.2			38.1			34.3	
Approach LOS		D			D			D			C	

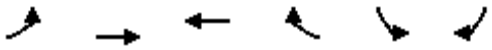
Intersection Summary			
Area Type:	Other		
Cycle Length: 162			
Actuated Cycle Length: 109.5			
Natural Cycle: 85			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 37.9		Intersection LOS: D	
Intersection Capacity Utilization 76.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave



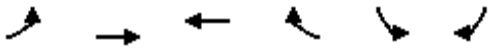
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	540	160	535	67	624	51	569
v/c Ratio	0.32	0.66	0.48	0.55	0.25	0.84	0.22	0.76
Control Delay	28.5	45.5	30.1	38.1	17.3	40.4	17.2	35.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	45.5	30.1	38.1	17.3	40.4	17.2	35.8
Queue Length 50th (ft)	44	186	75	171	23	379	17	337
Queue Length 95th (ft)	105	319	162	290	56	646	45	572
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	335	1241	410	1521	269	1352	231	1375
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.44	0.39	0.35	0.25	0.46	0.22	0.41

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	642	784	58	15	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250			0	0	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00
Frt			0.991			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	1846	0	1770	1583
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	1846	0	1770	1583
Link Speed (mph)		35	35		30	
Link Distance (ft)		964	3799		299	
Travel Time (s)		18.8	74.0		6.8	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	56	713	871	64	17	50
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	713	935	0	17	50
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	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)	15			9	15	9
Sign Control		Free	Free		Stop	

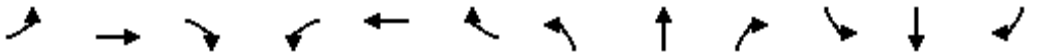
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	50	642	784	58	15	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)	56	713	871	64	17	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)		964				
pX, platoon unblocked					0.86	
vC, conflicting volume	936				1371	903
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	936				1099	903
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				90	82
cM capacity (veh/h)	728				164	280

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	SB 1	SB 2
Volume Total	56	357	357	936	17	50
Volume Left	56	0	0	0	17	0
Volume Right	0	0	0	64	0	50
cSH	728	1700	1700	1700	164	280
Volume to Capacity	0.08	0.21	0.21	0.55	0.10	0.18
Queue Length 95th (ft)	6	0	0	0	8	16
Control Delay (s)	10.4	0.0	0.0	0.0	29.5	20.6
Lane LOS	B				D	C
Approach Delay (s)	0.7			0.0	22.8	
Approach LOS					C	

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

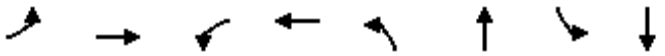


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	130	538	68	202	621	75	81	597	136	56	551	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	140		0	160		0	285		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.983			0.984			0.972			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3479	0	1770	3483	0	1770	1811	0	1770	1822	0
Flt Permitted	0.135			0.108			0.126			0.073		
Satd. Flow (perm)	251	3479	0	201	3483	0	235	1811	0	136	1822	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					8			10				
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		5313			964			2130			2627	
Travel Time (s)		103.5			18.8			41.5			51.2	
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)	144	598	76	224	690	83	90	663	151	62	612	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	674	0	224	773	0	90	814	0	62	719	0
Enter Blocked Intersection	No	No	No	No	No	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			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes			Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	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	1		1	1	
Detector Template	Gville	Thru		Left	Thru		Gville	Gville		Left	Gville	
Leading Detector (ft)	27	100		20	100		27	27		20	27	
Trailing Detector (ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Position(ft)	-3	0		0	0		-3	-3		0	-3	
Detector 1 Size(ft)	30	6		20	6		30	30		20	30	
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							
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	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	6.5	18.5		6.5	18.5		6.5	18.5		6.5	18.5	
Minimum Split (s)	11.5	28.0		11.5	23.5		11.5	32.0		11.5	32.0	
Total Split (s)	18.0	39.0	0.0	25.0	46.0	0.0	11.6	86.4	0.0	11.6	86.4	0.0
Total Split (%)	11.1%	24.1%	0.0%	15.4%	28.4%	0.0%	7.2%	53.3%	0.0%	7.2%	53.3%	0.0%
Maximum Green (s)	13.0	34.0		20.0	41.0		6.6	81.4		6.6	81.4	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	3.5		3.0	3.0		2.5	3.5		3.0	3.5	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)		7.0			5.0			7.0			7.0	
Flash Dont Walk (s)		16.0			11.0			20.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.9	32.1		55.5	38.6		76.1	71.2		74.7	67.9	
Actuated g/C Ratio	0.30	0.22		0.38	0.26		0.52	0.49		0.51	0.47	
v/c Ratio	0.72	0.88		0.82	0.83		0.46	0.91		0.42	0.85	
Control Delay	56.1	70.4		62.9	60.6		23.7	50.8		24.7	44.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	56.1	70.4		62.9	60.6		23.7	50.8		24.7	44.5	
LOS	E	E		E	E		C	D		C	D	
Approach Delay		67.9			61.1			48.1			43.0	
Approach LOS		E			E			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 162			
Actuated Cycle Length: 145.7			
Natural Cycle: 105			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 55.3		Intersection LOS: E	
Intersection Capacity Utilization 90.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: NW 34th St & NW 8th Ave



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	144	674	224	773	90	814	62	719
v/c Ratio	0.72	0.88	0.82	0.83	0.46	0.91	0.42	0.85
Control Delay	56.1	70.4	62.9	60.6	23.7	50.8	24.7	44.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.1	70.4	62.9	60.6	23.7	50.8	24.7	44.5
Queue Length 50th (ft)	101	358	172	396	41	756	28	615
Queue Length 95th (ft)	#194	#488	#325	#500	71	#1037	52	797
Internal Link Dist (ft)		5233		884		2050		2547
Turn Bay Length (ft)	150		140		160		285	
Base Capacity (vph)	218	837	299	1016	194	1047	146	1049
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.81	0.75	0.76	0.46	0.78	0.42	0.69

Intersection Summary

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